APPENDIX E RISK ASSESSMENT

Environmental Management Plan

Wiso Basin Seismic Survey EP200, 205 & 207

The risk assessment table presents the information used evaluate/calculate the inherent risk and residual risk for each key project risk. Risk assessment methodology is described in Section 6.2.

The following details are not included in this appendix table, but can be found in the specific management framework tables in Section 6.5 produced for each risk – ALARP Rationale, Environmental Outcome, Environmental Performance Standard (performance measure), Measurement Criteria (monitoring and records), reporting and responsibility.

RISK ASSESSMENT

Risk ID	Theme	Aspect	Possible impact	Assumptions / Limitations / Information	Activity	Hazard(s)	L*	C*	Score	IR*	Mitigation measures	L*	C*	Score	RR*	Uncertainty (SCI)	COP Section
1	**Biodiversity**	**Threatened species**	Significant impact to Greater Bilby (a threatened species)	Field surveys confirmed that bilbies are present within the Project area, including areas proposed to be cleared for lines 03B and 06C	Line preparation and camp pad establishment	Damage to active burrows; Injury or death to bilby; Removal of suitable habitat:	**C**	**4**	**18**	**High**	• Pre-clearance survey. Engage an ecologist with experience in Greater Bilby sign recognition to conduct a pre-clearance survey within the mapped Greater Bilby high likelihood area at southern end of 03B and 06C. The aim of the pre-clearance survey is to record the location of active Greater Bilby burrows so avoidance strategies (and suitable buffers) can be implemented - described below: - Line preparation and seismic survey will avoid active bilby burrows by at least 50m, and avoid intact inactive burrows (no buffer). - Camp pads will not be constructed within 300m of active burrow site. • Vegetation clearing will avoid patches of Acacia-shrubs where possible (by weaving and meandering around patches), particularly in Greater Bilby high likelihood area. This is because some shrub species provide important food sources for bilby, for example Turpentine can have root dwelling larvae that is a key dietary component of bilby). Pre-clearance surveys will identify patches to be avoided, or a path of minimal impact will be selected if avoidance is not practicable.	**A**	**4**	**10**	**Moderate**	Low	A.3.1 Site Selection and Planning A.3.5 Biodiversity Protection
					Seismic survey and recording	Disturbance / displacement of bilby; Vibrations from recording result in burrow collapse.	**C**	**4**	**18**	**High**	• Apply buffers for active burrows as described above. • Ensure that field staff do not drive vehicles out of designated areas • Staff awareness. Staff inductions to promote staff awareness of Greater Bilby occurrence within the Project area. Induction material will provide photographs of characteristic bilby sign (such as burrows and diggings) so that field staff can report any suspected sign. If suspected sign is identified, work will cease in the area until a suitable qualified person can confirm species and provide advice on how to mitigate impacts (if it is indeed active Greater Bilby).	**A**	**3**	**6**	**Low**	Low	
					Vehicle movements on seismic lines and access roads/tracks	Road kill	**A**	**4**	**10**	**Moderate**	• Avoid night-shift seismic survey in areas with confirmed Greater Bilby activity. This will be determined by per-clearance survey. • No night driving. Driving between 8pm and 6am will not occur as part of this Project to avoid chance of Greater Bilby roadkill (because bilby are active at night and have been previously observed on Lajamanu Road and Buntine Highway). • Staff awareness. Staff inductions to promote staff awareness of Greater Bilby occurrence within the Project area. Induction material will provide photographs of characteristic bilby sign (such as burrows and diggings) so that field staff can report any suspected sign. If suspected sign is identified, work will cease in the area until a suitable qualified person can confirm species and provide advice on how to mitigate impacts (if it is indeed active Greater Bilby).	**A**	**3**	**6**	**Low**	Low	
2	**Biodiversity**	**Threatened species**	Significant impact to Gouldian Finch (a threatened species)	Field survey confirmed that potentially suitable nesting habitat is present within Project area.	Line preparation and camp pad establishment	Removal of active nest hollows; Removal or disturbance of potential nest hollows. Death of individuals by clearing active nest hollows that contain young.	**B**	**4**	**14**	**High**	• Avoid clearing mature Snappy Gum trees. Snappy Gum are present on the lateritic plateau located in the western 15km of line 06C. Mature Snappy Gum in this area may support suitable nesting hollows for Gouldian Finch. Snappy Gum in this area have an open structure, and as such, it is expected that tree avoidance will be easily achievable (as seismic lines can weave and meander around trees). • A pre-clearance survey will be undertaken if mature Snappy Gum are required to be cleared / disturbed. The pre-clearance survey will be undertaken by a suitably qualified ecologist to identify if suitable nesting hollows are present, and/or if Gouldian Finch nesting is present. The following buffers will be applied (if relevant): - If suitable nesting hollows are recorded, the tree will be avoided. - If the hollow is confirmed to support Gouldian Finch nesting, seismic activities will avoid the nest site by at least 100m. • Staff awareness. Staff inductions to promote staff awareness of Gouldian Finch (and suitable nesting habitat) occurrence within the Project area. Induction material will provide a representative photograph of Snappy Gum trees.	**A**	**3**	**6**	**Low**	Low	A.3.1 Site Selection and Planning A.3.5 Biodiversity Protection

RISK ASSESSMENT																	
Risk ID	**Theme**	**Aspect**	**Possible impact**	**Assumptions / Limitations / Information**	**Activity**	**Hazard(s)**	**L***	**C***	**Score**	**IR***	**Mitigation measures**	**L***	**C***	**Score**	**RR***	**Uncertainty (SCI)**	**COP Section**
3	**Biodiversity**	**Sensitive vegetation**	Impacts to riparian vegetation and waterways (sensitive / significant vegetation)	Field survey confirmed that riparian vegetation and waterways are present within Project area	Line preparation and camp pad establishment	Removal of riparian vegetation; Degradation of waterways; Waterway flow impediment.	**B**	**4**	**14**	**High**	• Waterways will only be crossed when dry (which includes line preparation works, seismic survey and monitoring programs) • Three drainage crossings are required to be established for this Project – WC1, WC2 and WC3, which are all minor drainages and support arid zone riparian vegetation. These drainages do not have banks and have gentle slopes; as such earthworks (cuts) or crossing constructions will not be required. The following measures will be implemented to minimise impacts: - Crossings will be located in an area where the waterway profile will not be impacted. - Crossings will be selected at point of lowest shrub and tree cover. - Implement blade-up vegetation clearing to minimise disturbance to soils, groundcover vegetation, and overall stream function. • Scouting will be conducted prior to line preparation to select a route of lowest impact to riparian vegetation and avoid any sensitive areas. • The following mitigation measures are also relevant to riparian vegetation and waterways (including lines that occur on existing roads or tracks): - Weed introduction and spread (covered in risk ID 7) - Erosion and sediment control (covered in risk ID 12) - Contamination from spills of hazardous waste (covered in risk ID 16)	**A**	**3**	**6**	**Low**	Low	A.3.1 Site Selection and Planning A.3.5 Biodiversity Protection
					Seismic survey and recording	Contamination via accidental spill of hazardous substance	**B**	**4**	**14**	**High**	Refer to Risk ID 16	**A**	**3**	**6**	**Low**	Low	
4	**Biodiversity**	**Senisitive vegetation**	Impact to hollow bearing trees (sensitive / significant vegetation)	Field survey confirmed that hollow bearing trees may be present within Project area - mainly associated with Snappy Gum and Bullwaddy	Line preparation and camp pad establishment	Removal of hollow bearing trees; Removal of Bullwaddy thickets.	**E**	**3**	**20**	**High**	• Avoid clearing all large trees (i.e. >10 m in height) as they have potential to be hollow-bearing. This should be achievable for this project due to thin nature of clearing for line preparation (5m width), and open to sparse cover of the canopy species. • Minimise disturbance of Bullwaddy thickets. Avoid clearing Bullwaddy thickets present in the northern 5km of line 03B. Proposed line alignment has been designed to avoid Bullwaddy thickets. • Avoid / minimise clearing of mature Snappy Gum. Refer to Gouldian Finch mitigations in regards to minimising impacts to hollow-bearing Snappy Gum trees (covered in risk ID 2). • Staff awareness / education. The site induction will include details on large trees species known to occur within the Project footprint. Provide photographs of Snappy Gum and Bullwaddy trees as part of inductions (distinctive tree) so that line preparation crew are familiar with the species.	**A**	**3**	**6**	**Low**	Low	A.3.1 Site Selection and Planning A.3.5 Biodiversity Protection
5	**Biodiversity**	**Important habitat**	Impacts to wetlands / waterholes	Field survey confirm that wetlands and waterholes are present within and close to Project area	Line preparation and camp pad establishment	Degradation of soakage; Degradation of gilgai	**D**	**3**	**13**	**High**	• Soakage. Implement a 250m protection buffer (at least) around the soakage identified on the northern edge of line 03B. • Gilgai. The following measures will be in place to minimise potential impacts to Gilgai identified at site WC1: - Seismic line preparation / clearing will avoid direct disturbance of Gilgai formations that are present within a drainage zone on line 03B. - Large Gilgai (>10m2) will be avoided by at least 25m. - Smaller Gilgai (<10m2) will be avoided by at least 10m. - No heavy earthworks or deep grader cuts will occur in this area. - ESCP will be in place to ensure that erosion and/or sedimentation impacts on Gilgai formations are minimised (covered in risk ID 12).	**A**	**3**	**6**	**Low**	Low	A.3.1 Site Selection and Planning A.3.5 Biodiversity Protection
					Seismic survey and recording	Erosion and sedimentation of soakage or gilgai feature; Accidental spill of hazardous substance (i.e. contamination)	**C**	**3**	**13**	**High**	• Refer to ESCP controls (risk ID 12) • Refer to contamination risk (risk ID 16)	**A**	**3**	**6**	**Low**	Low	

RISK ASSESSMENT																	
Risk ID	**Theme**	**Aspect**	**Possible impact**	**Assumptions / Limitations / Information**	**Activity**	**Hazard(s)**	**L***	**C***	**Score**	**IR***	**Mitigation measures**	**L***	**C***	**Score**	**RR***	**Uncertainty (SCI)**	**COP Section**
6	**Biodiversity**	**Habitat and vegetation**	Impacts to habitat (general)	Field survey confirmed that lines that require preparation mostly support an open-sparse mid and upper layers - with scattered patches of shrubs.	Line preparation and camp pad establishment	Unnecessary removal of mid and upper layer species - thereby degrading habitat value of local area.	**E**	**2**	**16**	**High**	• Line preparation activities on lines 03B and 06C will minimise disturbance to vegetation by meandering and weaving around trees and patches of shrubs; and using blade-up clearing methods (where practicable) to minimise disturbance to groundcover vegetation and soils. • For camp options that require vegetation clearing (1a, 1b, 2, 3), pad sites will be selected in areas that do not support large trees (i.e. >10m height) and minimise clearing of mid-storey vegetation (i.e. shrubs and small trees). • The following mitigation measures are also relevant to habitat loss in general: - Greater Bilby (covered in risk ID 1) - Gouldian Finch (covered in risk ID 2) - Riparian vegetation and waterway (covered in risk ID 3) - Hollow-bearing trees mitigations covered in risk ID 4) - Waterholes (covered in risk ID 5)	**B**	**2**	**5**	**Low**	Low	A.3.1 Site Selection and Planning A.3.5 Biodiversity Protection
					Seismic survey and recording	Dust pullution; Erosion; Contamination of soil	**D**	**2**	**12**	**Moderate**	• Dust pollution (covered in risk ID 13) • ESCP (covered in risk ID 12) • Contamination from spills of hazardous substances (covered in risk ID 16)	**B**	**2**	**5**	**Low**	Low	
7	**Biodiversity**	**Weeds**	Weed introduction and spread	Baseline weed survey confirmed that lines that require preparation do not currently support weed infestation. Baseline weed survey identified scattered weeds (of declared species) on the northern 50km of line 02A. It is assumed that weeds could be present within drainage crossings on line 01A, 02A and 06A.	Bringing equipment to Project area	Introducing weeds to Project area;	**C**	**4**	**18**	**High**	• A Weed Management Plan (WMP) has been prepared and will be implemented for this Project. The plan includes the following mitigations: - All vehicles/machinery/equipment entering the Project area to be cleaned and free of soil and vegetative matter, and have a valid weed hygiene declaration prior to entering Project area. - Spot checks on vehicle/equipment/machinery to ensure inspections are completed correctly.	**B**	**2**	**5**	**Low**	Low	A.3.1 Site Selection and Planning A.3.5 Biodiversity Protection A.3.6 Weed Management
					Driving around the project area	Spreading weeds from existing infestations	**C**	**3**	**13**	**High**	• A Weed Management Plan (WMP) has been prepared and will be implemented for this Project. The plan includes the following mitigations: - All vehicles, machinery and equipment to stay on formed access tracks, except for those involved in clearing - Site environmental inductions for all personnel and contractors to include vehicle weed hygiene requirements - All personnel and contractors made aware of existing infestation locations and educated in the identification of existing weeds and potential priority weeds in the region. - Baseline weed survey to identify weed infestations to be avoided or managed. - All infestations of declared weeds (identified by baseline weed survey and pre-clearance survey) will be demarcated and avoided, where possible, via a detour around the infestation. - If infestations cannot be avoided, treat prior to traversing or carry out wash-down protocols at allocated wash-down site. - Vehicles/plant to be cleaned and free of soil and vegetative matter prior to moving beyond infestation	**B**	**2**	**5**	**Low**	Low	
8	**Biodiversity**	**Pests**	Pest and disease introduction or spread	There are no known soil borne diseases; or diseases current impacting livestock or native species within Project area. Feral animal are present within area that	Line preparation and camp pad establishment	Introduction of pests or disease from vehicles and machinery brought into Project area.	**C**	**4**	**18**	**High**	• All vehicles/machinery/equipment entering the Project area to be cleaned and free of soil and vegetative matter, and have a valid weed hygiene declaration prior to entering Project area this is part of weed management, but also minimise risk of introductions of pests and soil borne disease.	**B**	**2**	**5**	**Low**	Low	A.3.1 Site Selection and Planning A.3.5 Biodiversity Protection
					Seismic survey and recording	Introduction of pests or disease from vehicles and machinery brought into Project area.	**C**	**4**	**18**	**High**	• All vehicles/machinery/equipment entering the Project area to be cleaned and free of soil and vegetative matter, and have a valid weed hygiene declaration prior to entering Project area this is part of weed management, but also minimise risk of introductions of pests and soil borne disease.	**B**	**2**	**5**	**Low**	Low	

RISK ASSESSMENT																	
Risk ID	**Theme**	**Aspect**	**Possible impact**	**Assumptions / Limitations / Information**	**Activity**	**Hazard(s)**	**L***	**C***	**Score**	**IR***	**Mitigation measures**	**L***	**C***	**Score**	**RR***	**Uncertainty (SCI)**	**COP Section**
				may be attracted to food waste generated by Project.	Camp site management	Attraction of feral animals (i.e. cats, dogs/dingo); Increase of feral animals as a result of poor waste management.	**D**	**3**	**17**	**High**	• All waste will be covered or contained within dedicated waste disposal bins that cannot be tampered with or opened by fauna, to reduce attraction of the site from feral animal and pest species. • Staff will be informed of their duties regarding feral animals and will not encourage or entice them on site. • All rubbish, including food packaging, is to be disposed of in an appropriate container as soon as possible, to be transported off site (refer to waste management - covered in risk ID 17).	**B**	**2**	**5**	**Low**	Low	
9	**Biodiversity**	**Native fauna**	Fauna deaths / mortality	Field survey confirms that native fauna inhabit the Project area. Species may be actively foraging at night or day.	Line preparation and camp pad establishment	Direct mortality or injury; Habitat removal	**C**	**4**	**18**	**High**	• Clearing will be conducted in a single direction at slow speeds, allowing any fauna to move out of way of clearing activities. • Halt clearing in the presence of any fauna • Areas of known fauna habitat will be avoided where possible • Site inductions will ensure that all personnel are aware of their obligations and know the correct procedures for fauna encounters. • Ensure site environmental inductions for all site personnel and contractors include the management of onsite vegetation and flora, including site personnel to stay within designated access roads and work areas.	**A**	**3**	**6**	**Low**	Low	A.3.1 Site Selection and Planning A.3.5 Biodiversity Protection
					Seismic survey and recording	Accidental road kill from vehicle movements on seismic lines and access roads/tracks	**C**	**4**	**18**	**High**	• Slow vehicles when passing cattle or other wildlife • Avoid night driving in bilby habitat (relevant to lines 03B and 06C), or implement speed limits and staff awareness (as bilby are active at night and have been previously observed on Lajamanu Road and Buntine Highway). • Site inductions will ensure that all personnel are aware of their obligations and know the correct procedures for fauna encounters. • Vehicle movement will be restricted to existing access tracks and 2D seismic lines. • Vehicle speed restrictions apply when travelling in permit (60 km/hr on station access tracks and signed limit on gazetted roads) or drive to conditions. • Driving on site will be restricted to daytime hours, wherever possible. • Ensure site environmental inductions for all site personnel and contractors include the management of onsite vegetation and flora, including site personnel to stay within designated access roads and work areas.	**A**	**3**	**6**	**Low**	Low	
10	**People**	**Sacred sites**	Disturbance or damage to sacred sites	Sacred sites, Restricted Works Areas (RWA) and other significant sites have been identified by AAPA Authority Certificates. RA2019/124 (Doc: 201910813) (EP205) RA2019/125 (Doc: 201910822) (EP207) RA2019/126 (Doc: 201910825) (EP200) Numerous site identified in close proximity to the Project footprint.	All activities	Direct clearing / disturbance of site	**C**	**4**	**18**	**High**	• AAPA Authority Certificate was completed so that all sacred sites and RWA are determined. • Seismic lines have been revised to comply with conditions in the AAPA Authority Certificates for the Project. The Project footprint avoids all recorded RWAs and sacred sites. • RWA will be clearly recorded on planning maps. • The location of RWA will be provided in site inductions and staff made aware that they are not to enter these areas – including during rehabilitation activities post seismic recording.	**A**	**3**	**6**	**Low**	Low	A.3.1 Site Selection and Planning
						Unwanted access to a significant site	**C**	**4**	**18**	**High**	• All vehicles and staff will only work within approved / designated areas. • RWA will be clearly recorded on planning maps. • The location of RWA will be provided in site inductions and staff made aware that they are not to enter these areas – including during rehabilitation activities post seismic recording.	**A**	**3**	**6**	**Low**	Low	

RISK ASSESSMENT

Risk ID	Theme	Aspect	Possible impact	Assumptions / Limitations / Information	Activity	Hazard(s)	L*	C*	Score	IR*	Mitigation measures	L*	C*	Score	RR*	Uncertainty (SCI)	COP Section
11	**People**	**Cultural Heritage**	Disturbance or damage to cultural heritage sites	Cultural heritage sites have been identified in archaeological report. Include some in close proximity to project footprint.	Line preparation and camp pad establishment	Direct clearing / disturbance of site	**D**	**3**	**13**	**High**	• Archaeological assessment was undertaken to identify objects and sites. • Works Approval. Works Approval in accordance with Section 72 of the Heritage Act will be sought for any works which are likely to disturb or damage artefact scatters and isolated finds known to occur within the Project footprint. At this stage, the program has been design to avoid all recorded sites – as such no Works Approval is required (unless an unexpected find occurs during works / activities – described below). • Site avoidance. - Archaeological Sites AS1, AS3, AS4, AS5, AS6, AS7, AS8 and AS9 (and all six background scatters) occur outside the Project footprint and will not be impacted. • Deviation of seismic lines. - Archaeological Site AS2 on Line 03B will be avoided as shown on Figure 7 4. • Unexpected Find Protocol. The following steps will be undertaken if a suspected Aboriginal archaeological object or place is uncovered as a result of seismic works (i.e. line preparation). This will involve the following: - Work in the surrounding area is to stop immediately and records are made of the finds. - A temporary fence is to be erected around the site and appropriate controls put in place to ensure that no additional ground disturbance happens in the vicinity of the find. - A qualified archaeologist and a representative of the Traditional Owners will be engaged to identify the material and provide an initial assessment of the significance of the object and the likely nature and extent of any associated archaeological sites. - If the material is found to be of Aboriginal origin, the find will be reported to Heritage branch of the Northern Territory Government. - In the event that the Aboriginal object has been damaged or disturbed, the incident will be reported to Heritage branch of the Northern Territory Government. - Works will only recommence after advice from Heritage branch on the requirement for a Section 72 Works Approval; or where measures are implemented to avoid further damage to the Aboriginal archaeological place or object. • Staff awareness. Employees will be briefed on potential cultural heritage items that may be encountered (as part of site induction and training).	**A**	**3**	**6**	**Low**	Low	A.3.1 Site Selection and Planning
12	**Land**	**Erosion**	Erosion and sedimentation	Lines that require preparation (vegetation/land clearing) are considered to have a low to moderate erosion hazard; There are no formed drainages on lines that require preparation works; Lines on existing roads/tracks cross streams and jump-ups which will require targeted erosion controls.	Line preparation and camp pad establishment	Unnecessary traverse of erosion prone landforms; Erosion development in general; Wheel rut creation; Windrow creation; Waterway damage; Gilgai damage	**D**	**2**	**12**	**Moderate**	• Adhere to ESCP. • Undertake survey to identify erosion prone landforms so they can be avoided or control be in place to minimise chance of erosion development. • Use existing roads and access tracks where possible rather than disturbed intact vegetation and soils. • Undertake selective clearing (i.e. blade up as much as possible), such as only clearing when an alternative route is unavailable, and avoiding trees. • Minimise disturbance of riparian vegetation (only 3 crossings required during line preparation activities). • Temporary stockpiling of soil, equipment and materials within watercourses, or on adjacent banks and floodplains, is to be avoided (unless integral to drainage control) • Conduct clearing during dry season. Works will not be conducted in wet conditions. • Implement standard erosion and sediment control planning (ESCP) on lines 03B and 06C to minimise chance of gully erosion along cleared lines. • Ensure that line preparation minimises intersections of lateritic rises and calcrete rises within land types 4 and 5 because of increased erosion risk on sloped terrain. If crossings are required, erosion controls and/or monitoring will occur. • Do not traverse gilgai, and only conduct blade up clearing for sections of line in close proximity to gilgai. This will retain soil structure that will minimise any sedimentation. • Minimise grader cuts during line preparation works, and use ‘blade-up’ techniques where possible. There are no steep slopes present within lines that require preparation works; therefore, major earthworks are not expected to occur.	**B**	**2**	**5**	**Low**	Low	A.3.1 Site Selection and Planning A.3.4 Erosion and Sediment Control and Hydrology

RISK ASSESSMENT																	
Risk ID	**Theme**	**Aspect**	**Possible impact**	**Assumptions / Limitations / Information**	**Activity**	**Hazard(s)**	**L***	**C***	**Score**	**IR***	**Mitigation measures**	**L***	**C***	**Score**	**RR***	**Uncertainty (SCI)**	**COP Section**
					Seismic survey and recording (including on prepped lines and lines on existing roads)	Erosion and sedimentation of stream crossings; Erosion and sedimentation of sloped terrain;	**C**	**2**	**8**	**Moderate**	• Adhere to ESCP. • Seismic survey activities to avoid driving in wet boggy conditions to minimise chance of wheel rut creation and other erosion. • All vehicles to stay within designated areas and adhere to ESCP controls.	**B**	**2**	**5**	**Low**	Low	
					Rehabilitation	Erosion on lines, wheel ruts, windrows	**C**	**2**	**8**	**Moderate**	• Adhere to ESCP. • Rehabilitation and stabilisation of disturbed areas as per the Rehabilitation Plan. • Removed vegetation and/or topsoil to be re-spread over disturbed area to assist rehabilitation. Cleared vegetation will be uniformly re-spread over disturbed area to assist with rehabilitation process through agencies of increased infiltration and return of seed-bearing topsoil.	**B**	**2**	**5**	**Low**	Low	
13	**People**	**Dust**	Dust generation / pollution leading to injury or nuisance	It is assumed that soil surface within Project area is prone to dust generation; Sensitive receptors include homesteads, water bores, riparian vegetation, public roads	All activities	Dust creation from vehicle movements; clearing activities;	**D**	**3**	**17**	**High**	• Clearly identify all sensitive receptors so field staff can ensure that dust creation and complaints are avoided. • Use existing road and tracks and ensure tracks are suitable for the intended purpose and volume of traffic required. • Site environmental inductions for all site personnel and contractors in relation to land management tasks • All vegetation clearing must be in accordance with the Federal, Territory and local government vegetation clearing requirements. • Disturbed areas will be stabilised in accordance with the Rehabilitation Plan. • Vehicle speed restrictions apply when travelling in permit (60 km/hr on station access tracks and signed limit on gazetted roads) or drive to conditions. • Use water truck where applicable to manage dust emissions from vehicle movement on the site	**B**	**2**	**5**	**Low**	low	A.3.1 Site Selection and Planning
14	**People**	**Noise and vibration**	Noise and vibration pollution leading to injury or nuisance	Assuming cattle and people will be located within /adjacent to the Project area of influence. Sensitive receptors include homesteads, waterbores, riparian vegetation, public roads	All activities	Noise/vibrations causing nuisance to public and landholders; Noise/vibrations displacing native fauna	**C**	**2**	**8**	**Moderate**	**Noise** • Noise management and levels must comply with the Northern Territory Noise Management Framework Guideline (NT EPA 2018). • Slow vehicles when passing cattle, people or sensitive receptors (administrative). • Provide at least two weeks notification to households and businesses if operations are to be conducted within 10 km of their premises. • All nuisance-related complaints from sensitive receptors investigated and reported upon. • Ensure site environmental inductions for all site personnel and contractors include noise, vibration and light emissions requirements. • Ensure vehicles, machinery and equipment is maintained in good working order. • Daily and ongoing consultation with station managers and station personnel • Camps situated away from receptors and at least 50m from main public road edge. **Vibrations** • Ensure operating hours for 2D seismic line operation are established and communicated to personnel and contractors. 2D seismic line activities are over 12-hour daylight shifts. • Consult with pastoral landholders and take into consideration stock movements. • Provide at least 2 weeks notification to households and businesses if operations are to be conducted within 10km of the premises. • All nuisance related complains to be investigated and acted upon. • Work conducted in a progressive line allowing wildlife to avoid the area. • Ensure site inductions for all site personnel include vibration requirements. • Ensure vehicles, plant and equipment are maintained and in good order. • Ongoing consultation with pastoral station manager and other relevant parties.	**B**	**2**	**5**	**Low**	Low	A.3.1 Site Selection and Planning A.3.3 Noise

RISK ASSESSMENT																	
Risk ID	**Theme**	**Aspect**	**Possible impact**	**Assumptions / Limitations / Information**	**Activity**	**Hazard(s)**	**L***	**C***	**Score**	**IR***	**Mitigation measures**	**L***	**C***	**Score**	**RR***	**Uncertainty (SCI)**	**COP Section**
15	**People**	**Light**	Light pollution leading to injury or nuisance	Light pollution will mainly be associated with camp. No night shift activities proposed.	All activities	Light pollution affecting cattle and people	**C**	**2**	**8**	**Moderate**	• Ensure site environmental inductions for all site personnel and contractors include light emissions requirements. • Use directional lighting to limit light spread and emissions outside of the zone required. • Lights will be turned off when no longer required, once activity has been completed. • Task focussed lighting will be used and all boundary lighting will be positioned to face inwards to provide adequate lighting for safe operations, without excessive overspill • Avoid / minimise night driving • Camp pads will be situated away from sensitive receptors.	**B**	**1**	**2**	**Low**	Low	A.3.1 Site Selection and Planning
16	**Land**	**Contamination**	Contamination from spills of hazardous substances	Hazardous substances include diesel, oils, lubricants will be used. Small quantities of other liquid for vehicle maintenance - such as Coolants.	All activities	Inappropriate storage or handling of hazardous substances. Poor refuelling or fuel transfer practices leading to spills and contamination of soils and groundwater	**C**	**3**	**13**	**High**	• Use, storage and handling of fuel, chemicals and oils on site: - must comply with WHS legislation - be in accordance with their approved safety data sheet - must be stored to prevent release to the environment and to contain any spills - liquid hydrocarbons, whether separated or mixed with other fluids at a concentration greater than 1% by volume, must not be stored in any open top structure or pit • Any hazardous chemicals or those that may cause environmental harm are to be stored within secondary containment. • Secondary containment must meet all of the following: - sufficient capacity to hold 100% of the volume of the largest container stored in the area plus 10%, unless the container is equipped with individual secondary containment - permeability able to contain materials or waste until it can be removed or treated - provide for separation of clean and dirty water - be compatible with the material or waste stored or used within the containment - be resistant to physical, chemical and other failure during handling, installation and use - be maintained in good order at all times - secondary containment requirements can be met with double-lined or double-walled storage tanks. • All secondary containment (when in use) shall be inspected weekly, unless being operated through the wet season during which they should be monitored daily. If the secondary containment is damaged or compromised, repairs must be carried out as soon as practicable. • Materials that escape from primary containment or are otherwise spilled onto secondary containment shall be removed as soon as possible. • Storage areas will be distant from sensitive environmental features including RWAs identified in 6.5.16. • Adhere to Spill Response Management Plan. Outlines spill prevention, response procedure and spill clean-up processes.	**A**	**3**	**6**	**Low**	Low	A.3.1 Site Selection and Planning A.3.8 Containment of Contaminants C.7.2 Spill Management Plan
17	**Land**	**Contamination**	Contamination from wastewater and general waste	Majority of waste and wastewater will be associated with camp site management.	Camp management and general site works	Contaminated soil from wastewater from camp; general waste from all activities	**B**	**3**	**9**	**Moderate**	• Adhere to Waste and Wastewater Management Plan. • Designated waste storage/irrigation area will be located away from sensitive receptors area such as waterways or drainage lines • Wastewater will be treated to the required environmental guidelines for advanced secondary effluent (Class “B”) • Designated waste storage and handling area to be planned for and provided onsite. • Removal and disposal of hazardous wastes to be in accordance with NT hazardous waste disposal requirements. • Sufficient waste receptacles will be provided on site and any work areas. • Waste will be segregated for ease of disposal. • All staff to be informed of the waste management plan and regular inspections will ensure compliance.	**A**	**3**	**3**	**Low**	Low	A.3.1 Site Selection and Planning A.3.8 Containment of Contaminants C.7.2 Spill Management Plan

RISK ASSESSMENT																	
Risk ID	**Theme**	**Aspect**	**Possible impact**	**Assumptions / Limitations / Information**	**Activity**	**Hazard(s)**	**L***	**C***	**Score**	**IR***	**Mitigation measures**	**L***	**C***	**Score**	**RR***	**Uncertainty (SCI)**	**COP Section**
18	**Land**	**Fire**	Bushfire a result of Project activities	Assumes fuel loads in surrounding bushlands will be high and flammable.	All activities	Project activity cause fire in surrounding vegetation. This could result in impacts to pastoral activities and also impacts to ecological values.	**C**	**5**	**22**	**Very High**	• Adhere to Bushfire Management Plan • Analysis of baseline fire information (at least 10 years) • Analysis of impacts of the proposed activities on the existing fire management regime • Coordination with the landholder and other land users and consistency with the landholder's fire management obligations and strategies • No hot works are permitted on total fire ban days without written approval from a fire control officer or fire warden • Implementation of the interest holder's appropriate fire mitigation measures such as: • Monitoring of seasonal conditions and fuel loads • Maintenance of fire access trails and fire breaks around infrastructure • Controlled burns • Communication system for monitoring bushfire alerts in the area • Annual fire mapping to monitor changes to fire frequency in the relevant area • Monitor the NAFI website and adhere to total fire ban days. Updates provided at daily toolbox meetings. • Fire extinguishers fitted to all vehicles • All personnel and contractors will be informed about the key features of the BMP as part of their induction • Clean out vehicle engine bay regularly, with special attention paid on red alert days, to prevent grass igniting on the hot vehicle components • Smoking only allowed in designated smoking areas.	**B**	**3**	**9**	**Moderate**	Low	A.3.1 Site Selection and Planning A.3.7 Fire Management
19	**Land**	**Land access**	Unwanted access or interference with pastoral or TO activities	Active pastoral station with bores in close proximity to access tracks; Station tracks to be used for access and seismic survey; Sacred sites present in area	All activities	Impacting tracks due to wet weather; Unwanted access; Cattle interference; Increased traffic on roads resulting in accidents or delays to stakeholder activities.	**E**	**3**	**20**	**High**	• Site inductions are to ensure that all personnel are aware of and understand social constraints of working with in the permit area, including conditions specified in the Land Access Agreement with the host pastoral leaseholder. • All workers will be required to attend cultural awareness training and code of conduct. • Work instruction to be issued to all contractors relating to access constraints. • Consult with other relevant land users and public interest groups, such as pastoral leaseholders, Aboriginal communities, natural resource managers, conservation groups, tourism operators and other affected parties, to exchange information and facilitate good working relationships as required. • Prior to commencement onsite, communicate with pastoral leaseholders for access permission. Provide detail of the time and dates proposed to be on site, and the location, in advance of works commencing according to the regulations, including detailed maps showing pastoral infrastructure. • Land Access Agreement (LAA) to be in place with each station prior to commencement of the regulated activity in the permit area. • If required, conducted maintenance on any tracks or roads that were used during the seismic program. This will be identified by site inspections, monitoring results and at the land holders request. All maintenance activities will be discussed and approved by the relevant owner/stakeholder.	**A**	**2**	**3**	**Low**	Low	A.3.1 Site Selection and Planning
20	**Land**	**Rehabilitation**	Rehabilitation failure	Rehabilitation will be require on lines 03B and 06C and 3 to 4 camps (as these areas required vegetation/land clearing); Other Project activities located in existing cleared area so rehabilitation will be limited to maintenance.	Rehabilitation	Ineffective or ongoing degradation of vegetation, land and soil (post activity)	**B**	**3**	**9**	**Moderate**	Adhere to Rehabilitation Plan (Appendix L), which will ensure the following: • Work areas are progressively rehabilitated as soon as possible following the completion of work. • Stockpiled soil and vegetation are re-spread over disturbed areas to facilitate vegetation regrowth and limit erosion. • Any rehabilitation issues (i.e. erosion, weed infestation, soil degradation, low vegetation over) are discovered early so remedial works can be effectively undertaken without disturbance to other rehabilitating areas.	**A**	**2**	**3**	**Low**	Low	A.3.1 Site Selection and Planning A.3.9 Rehabilitation

APPENDIX F STAKEHOLDER ENGAGEMENT LOG

Environmental Management Plan

Wiso Basin Seismic Survey EP200, 205 & 207

COMMUNICATIONS REGISTER									
Company:	Blue Energy								
Project Name:	Wiso Seismic EMP								
Project Description:	2D seismic program across EPs 200, 205 & 207 in the NT								
Date	**Company and contact person**	**Communication type (meeting, email, phone)**	**Type of Engagement**	**Interest holder Representative**	**Summary of engagement**	**Written Response Received**	**Interest holder response**	**Outcome/ Change to EMP required?**	**Reviewed status**
2/03/2020	CLC	email	meeting request	NMcD	Blue seek to meet and discuss engagement	NA	Blue would like to meet with the TO's and have the CLC organise such meeting even though the permits are granted clear of Native Title. The CLC refuse to organise meetings unless Blue enter into an Exploration Agreement which Blue does not agree with. Further to this, CLC until late 2022 refused to call any meetings until Pepper recommendation 11.6 _Indigenous Education was implemented	follow up with CLC required to be able to organise meetings with TO's	
3/03/2020	CLC	email	on country meetings	NMcD	confirmation of no on country meetings to be held	Yes	As above		

COMMUNICATIONS REGISTER	
Company:	Blue Energy
Project Name:	Wiso Seismic EMP
Project Description:	2D seismic program across EPs 200, 205 & 207 in the NT

Date	Company and contact person	Communication type (meeting, email, phone)	Type of Engagement	Interest holder Representative	Summary of engagement	Written Response Received	Interest holder response	Outcome/ Change to EMP required?	Reviewed status
3/03/2020	CLC	email	meeting request	NMcD	Blue seek to meet and discuss engagement	Yes	As above	CLC unavailable for meeting	
3/03/2020	CLC	email	work program	NMcD	on ground activities	NA	As above	BE use best endeavours to undertake work as described previously	
3/03/2020	CLC	email	work program	NMcD	CLC request commitment of BE to enter into EA prior to undertaking exploration. Seek to arrange meeting.	Yes	As above		
5/03/2020	CLC	email	engagement	NMcD	confirm that CLC acknowledge no further agreements are necessary but continue to push for EA	Yes	As above		
6/03/2020	CLC	email	meeting request	NMcD	CLC request agreement to exploration agreement prior to draft of agreement	Yes	As above	Blue not yet received CA let alone draft EA	
9/03/2020	CLC	email	meeting request	NMcD	blue request meeting to discuss and negotiate CA and engagement	Yes	As above		
12/03/2020	CLC	email	confidentiality agreement	NMcD	engagement	Yes	As above	failure to deliver CA and provide engagement opportunity	
6/05/2020	CLC	email	confidentiality agreement	NMcD	follow up by CLC to draft CA	Yes	As above		

COMMUNICATIONS REGISTER	
Company:	Blue Energy
Project Name:	Wiso Seismic EMP
Project Description:	2D seismic program across EPs 200, 205 & 207 in the NT

Date	Company and contact person	Communication type (meeting, email, phone)	Type of Engagement	Interest holder Representative	Summary of engagement	Written Response Received	Interest holder response	Outcome/ Change to EMP required?	Reviewed status
26/06/2020	CLC	email	confidentiality agreement	NMcD	supply of draft CA by CLC	Yes	As above		
7/07/2020	Hancock prospecting	phone	land access agreement	JP	land access agreement to Inverway and Riveren to be renewed	NA	Open to drafts		
9/07/2020	Hancock prospecting	email	land access agreement	JP	land access agreement to Inverway and Riveren draft agreement	Yes	Open to review draft		
31/07/2020	CLC	email	confidentiality agreement	NMcD	follow up by CLC to draft CA	No	As per above		
31/07/2020	CLC	email	confidentiality agreement	NMcD	follow up by CLC to draft CA	No	As per above		
21/08/2020	CLC	email	contact details for responsible person	NMcD	CA to negotiate exploration agreement (EA)	Yes	As per above		
21/08/2020	CLC	email	contact details for responsible person	NMcD	CA to negotiate exploration agreement (EA)	Yes	As above		
21/08/2020	CLC	email	confidentiality agreement	NMcD	response by Blue Energy to draft CA	Yes	As above		
25/08/2020	Hancock prospecting	email	land access agreement	JP	agreed land access agreement Riveren and Inverway	Yes	Work in good faith		
27/08/2020	CLC David young	email	meeting request	NMcD	proposed timing of meeting	Yes	As above		
3/09/2020	CLC	email	confidentiality agreement	NMcD	CA edits	Yes	As above		
4/09/2020	Blue Energy	phone conference	CLC engagement	GH/NMcD	S&E, consent to negotiate EPA	Yes	Discussion in good faith		

COMMUNICATIONS REGISTER	
Company:	Blue Energy
Project Name:	Wiso Seismic EMP
Project Description:	2D seismic program across EPs 200, 205 & 207 in the NT

Date	Company and contact person	Communication type (meeting, email, phone)	Type of Engagement	Interest holder Representative	Summary of engagement	Written Response Received	Interest holder response	Outcome/ Change to EMP required?	Reviewed status
10/09/2020	CLC	email	update to engagement	NMcD	AAPA advises progress to engagement may continue shortly. CLC engagement will need to commence	Yes	As above		
10/09/2020	CLC	email	confidentiality agreement	NMcD	CA and unlikely to undertake on county meetings until March 2021 and completion of inquiry recommend 11.6	Yes	As above		
10/09/2020	CLC	email	update to engagement	NMcD	AAPA advises progress to engagement may continue shortly. CLC engagement will need to commence	Yes	As above		
10/09/2020	CLC	email	confidentiality agreement	NMcD	CA and unlikley to undertake on county meetings until March 2021 and completion of inquiry recommend 11.6	Yes	As above		
15/09/2020	CLC	email	confidentiality agreement	NMcD	CA mark up	NA	As above		
13/01/2021	CLC	email	on country meetings	NMcD	contact to arrange on country meetings and finalise agreements	NA	As above	awaiting reply from CLC	
15/03/2021	Hancock prospecting	email	land access agreement	JP	review scope of land access agreement to comply with new DITT regulations.	Yes	Work in good faith		

COMMUNICATIONS REGISTER	
Company:	Blue Energy
Project Name:	Wiso Seismic EMP
Project Description:	2D seismic program across EPs 200, 205 & 207 in the NT

Date	Company and contact person	Communication type (meeting, email, phone)	Type of Engagement	Interest holder Representative	Summary of engagement	Written Response Received	Interest holder response	Outcome/ Change to EMP required?	Reviewed status
30/04/2021	CLC Tom Robertson	email	CA and on country re 11.6 recommndation of enquiry	NMcD	follow up to promote engagement with CLC and indigenous stakeholders	Yes	As above	waiting on response	
10/06/2021	CLC Tom Robertson	email	follow up for CA draft with changes to operator	NMcD	amend draft to reflect Wiso and Blue relationship	Yes	As above	waiting on response	
21/06/2021	Hancock prospecting	email	land access agreement	JP	issue revised land access agreement draft for consideration	Yes	Work in good faith	document issued	
29/06/2021	CLC Tom Robertson	email	follow up for CA	NMcD	chasing up draft CA	NA	As above		
6/07/2021	CLC Anna Falzon	email	CA	AF	Operator and owner of EP	NA	As above	Blue responded to query	complete
12/07/2021	Hancock prospecting	email	land access agreement	JP	follow up the review by Hancock of the proposed agreement	NA	Work in good faith	waiting on reply	
12/7/2021	Hancock prospecting	email	land access agreement	JP	Response from Hancock - properties are now for sale. Disinclined to complete agreement.	Yes	Work in good faith	await decision on progress from BE	
26/07/2021	jumbuck Pastoral Meaghan Kennedy	Email	land access agreement	GH	approach new owners of Wave Hill and Cattle Creek to open negotiation on land access agreement	NA	Work in good faith	waiting on reply	
26/07/2021	AA co. Sam brown	email	land access agreement	GH	contact AA co for new land access agreement for Camfield station	NA	Work in good faith	Sam responded with draft agreement. Issued to Blue for review	

COMMUNICATIONS REGISTER									
Company:	Blue Energy								
Project Name:	Wiso Seismic EMP								
Project Description:	2D seismic program across EPs 200, 205 & 207 in the NT								
Date	**Company and contact person**	**Communication type (meeting, email, phone)**	**Type of Engagement**	**Interest holder Representative**	**Summary of engagement**	**Written Response Received**	**Interest holder response**	**Outcome/ Change to EMP required?**	**Reviewed status**
								to comply with new regs.	
26/07/2021	Heytesbury Cattle Co. Keith Murray	email	land access agreement	GH	contact Heytesbury for new land access agreement for Vic River Downs station	NA	Work in good faith	waiting on reply	
2/08/2021	jumbuck Pastoral Meaghan Kennedy	Email	land access agreement	GH	follow up to approach new owners of Wave Hill and Cattle Creek to open negotiation on land access agreement	NA	Work in good faith	still waiting on reply	
4/08/2021	Jumbuck Pastoral Callum McLachlan	phone 0417 882007	outline propsoed work program and need for LAA	GH	Callum agreed to send him draft LAA for review	Yes	Work in good faith		
6/8/2021	Jumbuck Pastoral Callum McLachlan	email	work program	GH	issue copy of work program outline document	NA	Work in good faith	There was no material comments or issues to deal with	
7/8/2021	Jumbuck Pastoral Callum McLachlan	email	Water resources	GH	issue copy of Gov water reports to JP	NA	Work in good faith	No comments received	
9/8/21	jumbuck Pastoral Meaghan Kennedy	Email	Reconnaissance program outline to pastoralist	GH	Issued copy of reconnaissance program outline	NA		No comments recieved	
10/8/2021	Keith Murray Heytesbury Cattle Co	email	land access agreement	GH	issue draft land access agreement for review by Heytsbury	NA	Work in good faith		

COMMUNICATIONS REGISTER	
Company:	Blue Energy
Project Name:	Wiso Seismic EMP
Project Description:	2D seismic program across EPs 200, 205 & 207 in the NT

Date	Company and contact person	Communication type (meeting, email, phone)	Type of Engagement	Interest holder Representative	Summary of engagement	Written Response Received	Interest holder response	Outcome/ Change to EMP required?	Reviewed status
16/08/2021	CLC Anna Falzon	email	CA	NMcD	CA signatories Wiso Oil & Blue	NA	As above	CLC review and comment	complete
20/08/2021	CLC Anna Falzon	email	CA	AF	CA reviewed by CLC	Yes	As above	review draft	complete
23/08/2021	CLC Anna Falzon	email	CA deed	NMcD	acknowledge draft CA	Yes	As above	review of execution	complete
23/08/2021	CLC Anna Falzon	email	CA deed to enter into negotiation with CLC	NMcD	issue execution copy of CA	Yes	As above		
25/8/2021	Blue Energy	email/phone	LAA, F15, f50	JP	signature and approval of draft LAA to Heytesbury (Vic down) and Wave Hill Holdings (Jumbuck)	NA	Work in good faith	JP approved for issue	complete
26/8/2021	Keith Murray Heytesbury Cattle Co	email	LAA, F15, f50	GH	issue draft land access agreement for review by Heytsbury (vic down)	NA	Work in good faith	issued	
26/8/2021	Callum mcLachlan Wave HillHoldings	email	LAA, F15, f50	GH	issue draft land access agreement to Wave hill holdings (Jumbuck pastoral) for Cattle Creek and Wave hill cattle stations	NA	Work in good faith	issued	
26/8/2021	CLC Anna Falzon	email	CA	NMcD	review final CA	NA	As above	issued to parties	complete
27/08/2021	Keith Murray Heytesbury Cattle Co	email	LAA	GH	Rejected draft as it did not address his queries from the 19th.	Yes	Work in good faith	referred the document back to Neil McDonald for further work	

COMMUNICATIONS REGISTER	
Company:	Blue Energy
Project Name:	Wiso Seismic EMP
Project Description:	2D seismic program across EPs 200, 205 & 207 in the NT

Date	Company and contact person	Communication type (meeting, email, phone)	Type of Engagement	Interest holder Representative	Summary of engagement	Written Response Received	Interest holder response	Outcome/ Change to EMP required?	Reviewed status
27/08/2021	CLC Anna Falzon	email	CA and JV partner	AF	require CA signed by JV	Yes	As above	seek signature	complete
31/08/2021	CLC Anna Falzon	email	CA	NMcD	CA and JV partner	Yes	As above	executed CA	complete
31/08/2021	CLC Anna Falzon	email	CA & JV	NMcD	CA and JV partner	Yes	As above	agreement signed	complete
2/09/2021	Keith Murray Heytesbury Cattle Co	email	LAA	NMcD	LAA draft accepted for review	NA	Work in good faith	Will respond after executive review and discussion	
7/09/2021	CLC Anna Falzon	email	CA	NMcD	executed copy to be provided	NA	As above	executed copy to be provided	
8/09/2021	Anna Falzon CLC	email	CA Blue Energy	NMcD	Blue Energy CA with the CLC	NA	As above		
9/09/2021	Keith Murray Heytesbury Cattle Co	email	LAA	NMcD	revised draft LAA	NA	Work in good faith		
9/09/2021	Stephen Skinner Lavington P/l	email	LAA	NMcD	LAA and compensation deed.	NA	Work in good faith		
16/09/2021	Keith Murray Heytesbury Cattle Co	email	LAA	NMcD	LAA and compensation deed.	NA	Work in good faith	Heytesbury have reviewed LAA. Want compensation schedule and security from Blue Energy.	
28/09/2021	Blue Energy	email	LAA Mt stanford	NMcD	clarify need for LAA, vary work program	NA	Work in good faith	arrange executive discussion to review	

COMMUNICATIONS REGISTER									
Company:	Blue Energy								
Project Name:	Wiso Seismic EMP								
Project Description:	2D seismic program across EPs 200, 205 & 207 in the NT								
Date	**Company and contact person**	**Communication type (meeting, email, phone)**	**Type of Engagement**	**Interest holder Representative**	**Summary of engagement**	**Written Response Received**	**Interest holder response**	**Outcome/ Change to EMP required?**	**Reviewed status**
								requirement for LAA	
28/09/2021	Sam Graham AA co.	email	LAA	GH	advise on land access agreement	NA	Work in good faith	Advise AA Co. LAA not required.	
28/09/2021	Sam Graham AA co.	email	LAA	GH	LAA	NA	Work in good faith	acknowledge LAA not required	complete
28/09/2021	Meaghan Kennedy Jumbuck pastoral (Wave hill holdings)	email	LAA	NMcD	LAA progress	NA	Work in good faith	follow up for progress on review of agreement	
14/10/2021	Jumbuck Pastoral Wave Hill Holdings	email	LAA	NMcD	LAA review and progress to agreement review	Yes	Work in good faith	wait on reply	
15/10/2021	Keith Murray Heytesbury Cattle Co	email	LAA	NMcD	LAA and compensation deed.	NA	Work in good faith	Follow up on review and table of compensation. Waiting on response from Heyesbury.	
16/09/2021	Keith Murray Heytesbury Cattle Co	email	LAA	NMcD	LAA and compensation deed.	Yes	Work in good faith	Heytesbury have reviewed LAA. Want compensation schedule and security from Blue Energy.	

COMMUNICATIONS REGISTER	
Company:	Blue Energy
Project Name:	Wiso Seismic EMP
Project Description:	2D seismic program across EPs 200, 205 & 207 in the NT

Date	Company and contact person	Communication type (meeting, email, phone)	Type of Engagement	Interest holder Representative	Summary of engagement	Written Response Received	Interest holder response	Outcome/ Change to EMP required?	Reviewed status
28/09/2021	Sam Graham AA co.	email	LAA	GH	advise on land access agreement	NA	Work in good faith	Advise AA Co. LAA not required.	
28/09/2021	Sam Graham AA co.	email	LAA	GH	LAA	Yes	Work in good faith	acknowledge LAA not required	complete
28/09/2021	Meaghan Kennedy Jumbuck pastoral (Wave hill holdings)	email	LAA	NMcD	LAA progress	NA	Work in good faith	follow up for progress on review of agreement	
14/10/2021	Jumbuck Pastoral Wave Hill Holdings	email	LAA	NMcD	LAA review and progress to agreement review	NA	Work in good faith	wait on reply	
15/10/2021	Keith Murray Heytesbury Cattle Co	email	LAA	NMcD	LAA and compensation deed.	NA	Work in good faith	follow up on review and table of compensation. Waiting on response from Heyesbury.	
22/10/2021	Stephen Skinner Lavington P/l	email	LAA	NMcD	request further information to complete LAA	NA	Work in good faith	wait on reply	
2/11/2021	Callum mcLachlan Wave HillHoldings	phone	LAA	GH	follow up to ascertain progress on the Jumbuck review of the LAA.	NA	Work in good faith	left message for call back to discuss.	

COMMUNICATIONS REGISTER	
Company:	Blue Energy
Project Name:	Wiso Seismic EMP
Project Description:	2D seismic program across EPs 200, 205 & 207 in the NT

Date	Company and contact person	Communication type (meeting, email, phone)	Type of Engagement	Interest holder Representative	Summary of engagement	Written Response Received	Interest holder response	Outcome/ Change to EMP required?	Reviewed status
4/11/2021	Callum mcLachlan Wave HillHoldings	phone	LAA	GH	Callum rang back to arrange a phone conference call for middle of week commencing 8/11/2021 to discuss draft LAA	Yes	Work in good faith	Confirmed arrangement with Neil McDonald for attending. Sent request to Meaghan at Jumbuck Wave Hill holdings to confirm day and time.	
10/11/21	Callum mcLachlan Wave HillHoldings	email	LAA and reconnaissance program	GH	Issued both documents and email trail	No			
5/5/22	CLC	email	on country meetings	NMcD	confirmation of no on country meetings to be held	Yes	As above		
8-15/6/22	CLC	emails	On country meetings	NMcD	confirmation of no on country meetings to be held	Yes	As above		
23/6/22	CLC	email	On country meetings	NMcD	confirmation of no on country meetings to be held	Yes	As above		
3/10/22	CLC	email	On country meetings	NMcD	Blue seek to meet and discuss engagement	NA	As above	follow up	

COMMUNICATIONS REGISTER	
Company:	Blue Energy
Project Name:	Wiso Seismic EMP
Project Description:	2D seismic program across EPs 200, 205 & 207 in the NT

Date	Company and contact person	Communication type (meeting, email, phone)	Type of Engagement	Interest holder Representative	Summary of engagement	Written Response Received	Interest holder response	Outcome/ Change to EMP required?	Reviewed status
28/11/22	CLC	email	on country meetings	NMcD	confirmation of no on country meetings to be held	Yes	As above		
2/2/22 to 20/2/23 (monthly contact)	Inverway Station	email	LAA	NMcD	LAA review and progress to agreement review	NA	Work in good faith	wait on reply	2/2/22 to 20/2/23 (monthly contact)
2/2/22 to 20/2/23 (monthly contact)	Jumbuck Pastoral Wave Hill Holdings	email	LAA	NMcD	LAA review and progress to agreement review	NA	Work in good faith	wait on reply	
23/2/23	Jumbuck Pastoral Wave Hill Holdings	Email	LAA	NMcD	Issued overview of the Seismic Program to pastoralists solicitor	NA	Issued for further meeting and discussions	NA	
27/2/23	Jumbuck Pastoral Wave Hill Holdings	Meeting in person	LAA and work program	NMcD	Meeting at Jumbuck Pastoral solicitors and pastoralist going through program overview and all general LAA issues		Agreed to continue discussions in good faith	NA	
19/4/23	Jumbuck Pastoral Wave Hill Holdings	Email	LAA	NMcD	Issued draft EMP to Jumbuck solicitor for their consideration		General comments but more for LAA suggested amendments	NA	
May 2023 to current	Jumbuck Pastoral Wave Hill Holdings	All	Ward Keller engaged to engage with their solicitors		Finalise LAA	Various	Various	No changes suggested, Finalising legals and compensation amounts	Ongoing

COMMUNICATIONS REGISTER									
Company:	Blue Energy								
Project Name:	Wiso Seismic EMP								
Project Description:	2D seismic program across EPs 200, 205 & 207 in the NT								
Date	**Company and contact person**	**Communication type (meeting, email, phone)**	**Type of Engagement**	**Interest holder Representative**	**Summary of engagement**	**Written Response Received**	**Interest holder response**	**Outcome/ Change to EMP required?**	**Reviewed status**
May 2023 to current	Inverway Station	All	Ward Keller engaged to engage with their solicitors		Finalise LAA	Various	Various	No changes suggested, Finalising legals and compensation amounts	Ongoing
2/11/23	CLC	Email	Update on seismic program		Update to seismic program and supplying maps and seismic program overview documents for comment				

APPENDIX G EROSION AND SEDIMENT CONTROL PLAN (ESCP)

Environmental Management Plan

Wiso Basin Seismic Survey EP200, 205 & 207

Erosion and Sediment Control Plan

EP 205 & 207 2D Seismic Survey

Blue. ENERGY

DOCUMENT CONTROL RECORD

Job	EZ21217
Document ID	222197-49
Author(s)	Adele Faraone (CPESC #11426), Tom Reilly

DOCUMENT HISTORY

Rev	Reviewed by	Approved by	Issued to	Date
1	Emma Lewis	Adele Faraone CPESC #11426	John Phillips (Blue Energy)	16 December 2022
2	Tom Reilly	Adele Faraone CPESC #11426	John Phillips (Blue Energy)	30 June 2023
3	Tom Reilly	Adele Faraone CPESC #11426	John Phillips (Blue Energy)	10/11/2023

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Appendices

ACRONYMS

AEP	Average Exceedance Probability
BOM	Bureau of Meteorology
CPESC	Certified Professional in Erosion and Sediment Control
DENR	NT Department of Environment and Natural Resources (Northern Territory)
DPIR	NT Department of Primary Industry and Resources
EHS	Environment Health and Safety
EMP	Environment Management Plan
EP	Exploration Permit
ESC	Erosion and Sediment Control
ESCP	Erosion and Sediment Control Plan
IECA	International Erosion Control Association
NT	Northern Territory
RCD	Rock Check Dam
RFD	Rock Filter Dam
RUSLE	Revised Universal Soil Loss Equation

1 INTRODUCTION

Blue Energy is a rapidly evolving oil and gas exploration company strategically positioned with abundant conventional and unconventional assets throughout Queensland and the Northern Territory to meet the rising demand for cleaner energy.

Blue Energy propose to complete a two dimensional (2D) seismic survey within exploration permits (EP) 205 and 207 (here in referred to as the Project area), which is located approximately 465 km south-west of Katherine, Northern Territory (location shown in Figure 1-1). The purpose of the seismic program is to confirm the local basin architecture and to define the potential of the formations within the region to contain unconventional and conventional gas and oil targets.

1.1 Purpose and Objectives

This ESCP has been prepared to provide a best-practice framework for implementation of effective erosion and sediment control associated with Blue Energy's work activities within the Project area.

The objectives of this ESCP are:

- To take all reasonable and practical measures to minimise actual or potential environmental harm resulting from soil or water movement resulting from work activities
- To maintain, and where practical, enhance the land use capabilities of disturbed areas with respect to the land's soil, water and vegetation attributes.
- To prevent soil loss from the site and deposition offsite, and minimise associated risks to water quality and air quality.
- To ensure satisfactory stabilisation of the site at completion of works.

1.2 Scope

This ESCP provides the overarching guidance demonstrating general drainage, erosion and sediment control principles, practices and methods to be implemented throughout project. This plan may be used to inform preparation of further Progressive ESCP's (where required), that provide detailed site-specific controls relevant to proposed exploration activities.

This ESCP has been reviewed by a Certified Professional in Erosion and Sediment Control (CPESC) in accordance with the guideline Best Practice Erosion and Sediment Control (IECA 2008).

The ESCP:

- Identifies areas vulnerable to erosion and sedimentation (including receiving waters).
- Includes an overarching erosion risk and hazard assessment.
- Details the management strategy and specific measures to be implemented to effectively manage erosion, and potential sediment mobilisation associated with the project activities.
- Includes details of both temporary and permanent erosion and sediment control methods and treatments to be implemented for all stages of the project (pre, during and post works).
- Includes information regarding proposed timing and staging of works, responsibilities, maintenance and monitoring requirements, and reporting procedures.

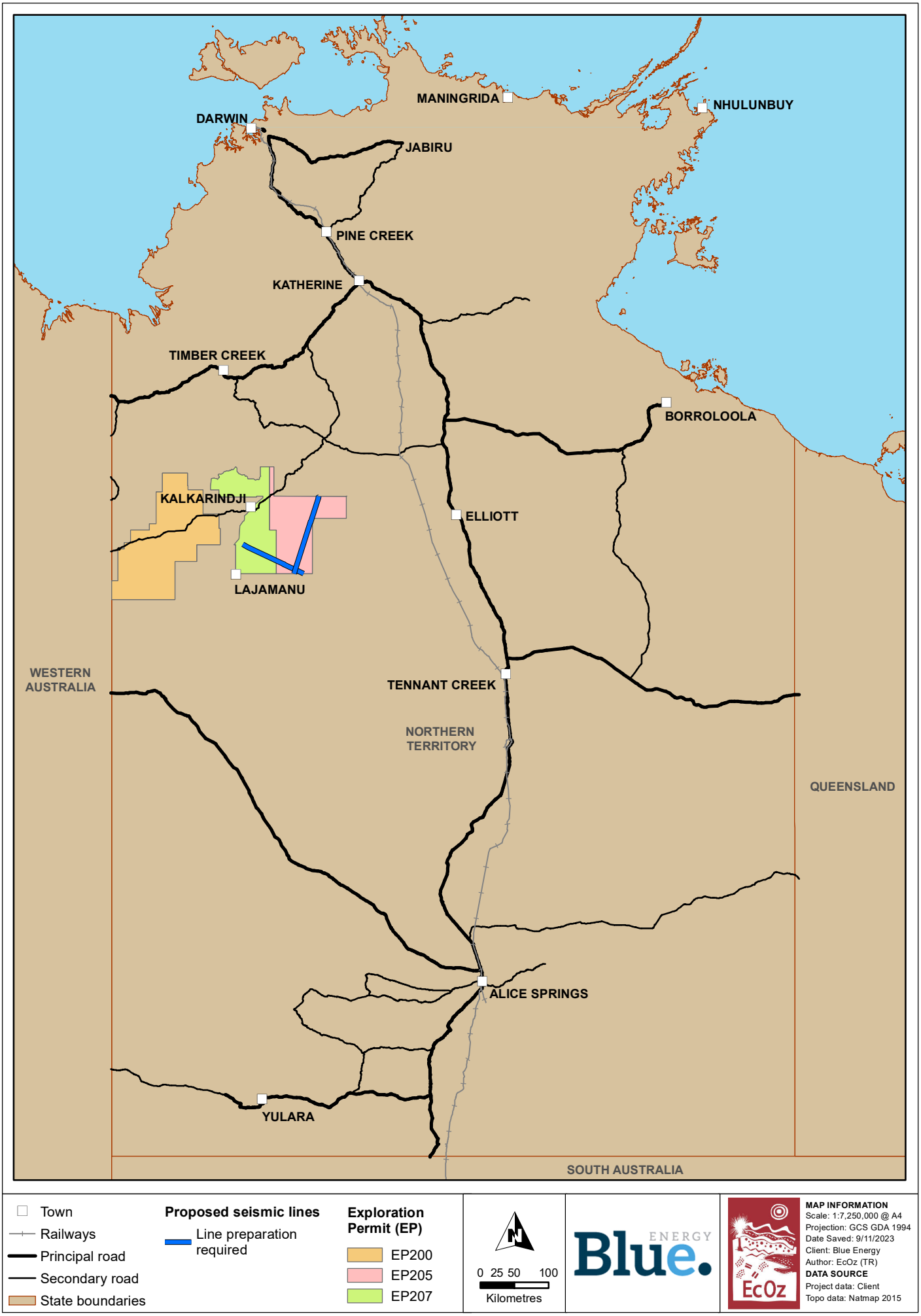

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Figure 1-1. Map of Project location

2 PROJECT AREA

2.1 Project Location

The Project is located entirely over a Perpetual Pastoral Lease(s) (PPL). Pastoral stations within the Project area are Cattle Creek (NT Por 2654) and Wave Hill (NT Por 2653) (shown on Figure 2-1).

2.2 Project brief

The Project is a two dimensional (2D) seismic survey planned to occur in 2024 dry season.

The Project comprises of two seismic lines (03B and 06C) which will provide a total data acquisition length of approximately 214 km. The two seismic lines (03B and 06C) are located in bushland and will require line preparation works. Three temporary exploration camps will be required; however, four options have been selected for planning purposes. Camp locations have been strategically positioned to minimise the number of camps required for the seismic survey (i.e. centrally positioned), to minimise vegetation clearing (i.e. positioned within existing cleared / disturbed areas), to avoid significant habitat areas or threatened species, and to avoid impacts to cultural heritage values (as identified by AAPA and Archaeological Assessment). All camp sites will require a pad to be cleared (dimensions will be approximately 80 x 100 m) (camp sites 1a, 1b, 2, 3).

Access tracks will not be required (seismic lines will be used for access to works areas and camps).

2.2.1 2D seismic program

Seismic acquisition is undertaken to 'image' below the surface and identify where oil and gas deposits may have accumulated. This method has a long history in the Australian petroleum industry and is used to identify and delineate geological structures and boundaries.

The seismic line survey is undertaken using vibrator trucks as energy sources to create acoustic waves, which travel through the earth and are then reflected from geological structures below the earth's surface. These reflections are recorded in a digital format and relayed to a seismic data processing centre to produce a 'cross-section' of the layers of the earth's crust.

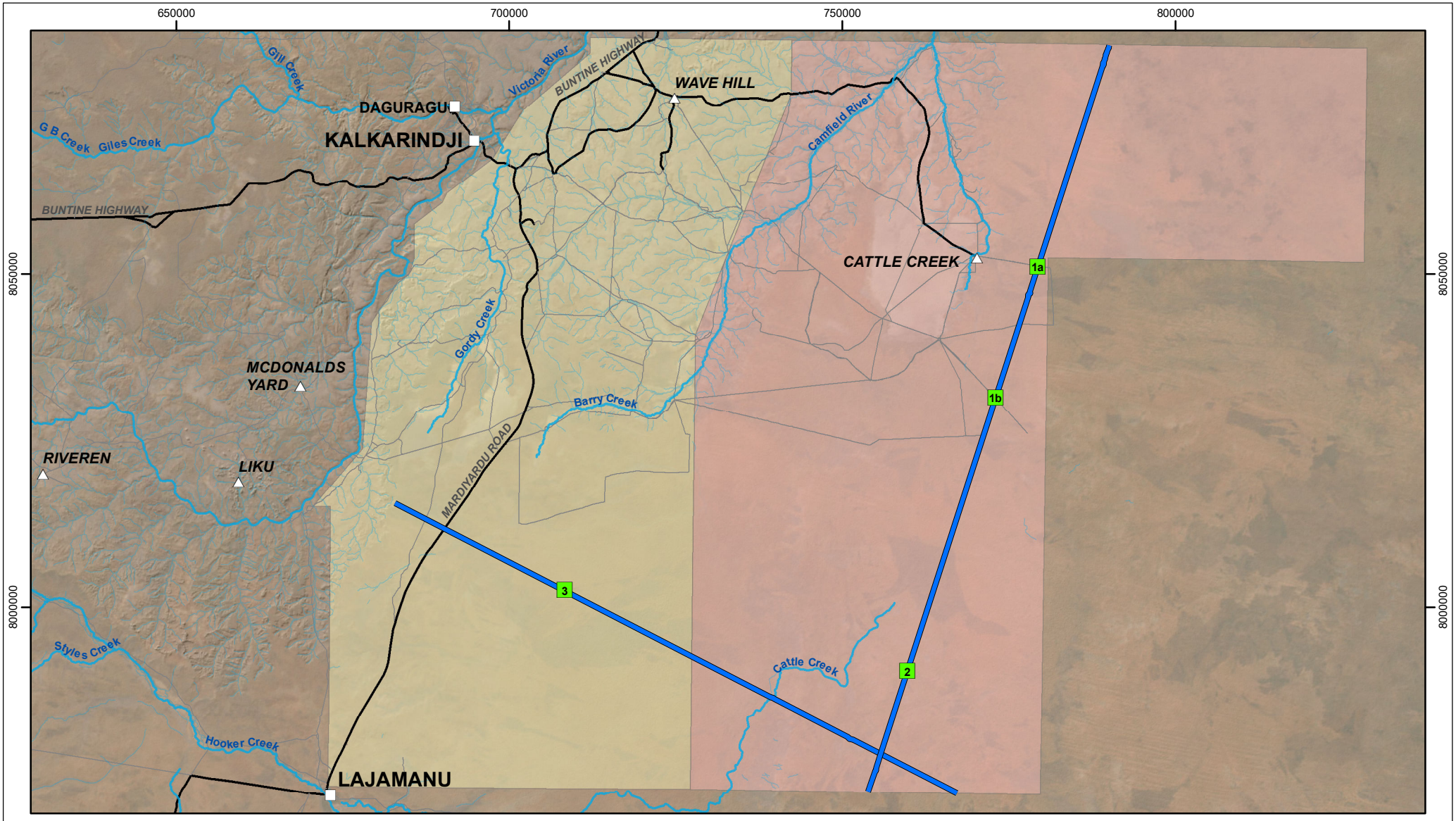

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Figure 2-1. Map of Project components

2.3 Extent of ground disturbance

Civil works involve vegetation clearing along seismic lines and drill hole sites; grading, excavation, stockpiling and compaction of soil material and provision of construction access, as described below.

2.3.1 2D seismic profiling

2D seismic line preparation

Line preparation will involve clearing a single vehicle track (4.5 metres wide) utilising a bulldozer to ensure sufficient access for the seismic survey vehicles. Line preparation will be required or lines 03B and 06C.

Seismic survey lines require a narrow linear corridor (4.5 m wide), the lines are typically constructed by applying the 'blade-up' clearing method and therefore may not require any formal drainage or rehabilitation works. Vegetation clearing may be required depending on the specific terrain and vegetation type. Blue Energy is committed to clearing the minimum amount of vegetation required to allow for the safe passage and operation of the vibriosis trucks and crew. Line clearing will be carried out by a bulldozer or grader and the majority of the 2D seismic lines will be traversed 'blade up' utilising the dozer tracks to compress stakes, flatten low vegetation and small rocks to minimise environmental impact. However, due to the nature of the environment the blade may be needed for short sections. Sections requiring the use of the blade down technique include areas with dense vegetation or areas with uneven and steep ground. Wherever possible the seismic lines will avoid crossing drainage lines or creek channels. Where it is necessary to have crossings, detours will be made to find the least sensitive crossing point.

The creation of windrows will be avoided / minimised (if they are created, they will be flattened as part of restoration activities post exploration). The terrain where line preparation is proposed is flat or only has gentle slopes, and as such, major earthworks (such as cuts) will not be required.

Cleared vegetation will be pushed to the side of the seismic lines, allowing for any seed stock to remain in place. Following the completion of the seismic survey the vegetation will be pushed back into place and spread across the seismic line. Given there will be minimal disturbance to vegetation and little to no damage to root stock or topsoil, natural regeneration of the vegetation is predicted to occur once the exploration activity has been completed.

Line alignment has been selected to avoid impacts to significant habitat areas or threatened species, sacred sites and archaeological heritage sites; and to minimise disturbance to vegetation by weaving around trees and shrubs (where possible).

The location of key project infrastructure is provided in Figure 2-1.

2.3.2 Camp sites and laydown areas

Camp pad dimensions will be approximately 80 x 100 m (0.8 ha). Four camp options have been selected; however only three will be required for the program (described in Table 2-1). Camps will require a pad to be cleared (camp options 1a, 1b, 2, 3). Camps will be situated 50 m from the road edge (i.e. 50m buffer) so that an appropriate vegetation buffer is retained (requirement in the *Land Clearing Guidelines*, DEPWS 2021).

Table 2-1. Camp site options and details

Camp	Line	EP	Easting	Northing	Clearing required	Description
1a	03B	205	779319	8051198	Yes	Pad to be selected in location that minimises disturbance to trees and shrubs.
1b	03B	205	773105	8031347		
2	03B	205	759826	7990467		
3	06C	205	731930	7990419		

Coordinates are in GDA94, MGA Zone 52

Figure 2-2. A typical camp layout

2.3.3 Access roads

Buntine Highway and Lajamanu Road will be used to access proposed seismic lines. No other access is required because the seismic lines will be used to access works areas and camps.

2.3.4 Borrow pits

No borrow pits have been proposed for this project.

2.3.5 Water points

The general use water will be sourced from a nearby pastoral station bore with permission from the land manager. There are a number of local bores and tanks that may be available for shower water, and potable water is possibly available at the communities. Lajamanu does have a water treatment plant and may be used as a potable water source. Other locations to source potable water are Kalkarindji, Daly Waters and Halls Creek. A fleet of water trucks will be used to transport water to/from the campsites.

2.4 Maintenance and rehabilitation

Seismic lines that were subject to land/vegetation clearing (i.e. lines 03B and 06C) will be restored so that soil surface is returned surrounding landform (in terms of slope). This will involve removal of any windrows created during line preparation activities (it is noted that windrow creation will be minimised where possible). If required, soil surface will be lightly scarified and ripped; and vegetation re-spread to stabilise soils and promote regeneration.

Camp pads, where subject to land/vegetation clearing, these will be restored so that soil surface is returned to surrounding landform (in terms of slope). Stockpiled vegetation and topsoil will be re-spread across the surface followed by light scarification and ripping (rip lines are to be spaced such that movement of soil is limited).

2.5 Project schedule

The seismic survey is planned to occur in the 2024 dry season, aiming to start in late April 2024 with rehabilitation completed by the end of July 2024 (proposed schedule for project activities is provided in Table 2-2). If the Project area experiences an above average (and or late finishing) wet season, the program may need to be delayed until access is suitable.

Table 2-2. Schedule of activities

Activity	Duration	Proposed dates
Pre-clearance surveys (to be conducted prior to clearing to inform management and buffers)	2 – 3 days duration	April 2024
2D Seismic line clearing and pointing	Two weeks duration	May 2024
2D seismic surveying	Two weeks duration	May – June 2024
2D seismic data acquisition	Two weeks duration	May – June 2024
2D seismic line rehabilitation	Two weeks duration	July 2024
Camp pad establishment	1 day duration per site	May 2024
Camp pad rehabilitation	1 day duration per site	July 2024

3 SITE CHARACTERISTICS

3.1 Climate and rainfall

The region experiences an arid to semi-arid climate, which is characterised by hot dry summers and cool dry winters, with a low average annual rainfall. Typically for this region, maximum and minimum temperatures are highest in summer.

The closest long-term Bureau of Meteorology (BoM) weather station is Wave Hill (station number 014840) approximately 9 km from the northern part of the Project area. Average annual rainfall is 687.7 mm; however, the amount of rainfall in the region is highly variable. For example, 2001 experienced 1201.8 mm of rain, while 2002 experienced 343.3 mm of rain. If heavy rainfall occurs, it is generally in the summer months from November to March and can result in flash flooding in the waterways. Average maximum temperatures range from 28.2ºC in June to 38.7ºC in November, and average minimum temperatures range from 10.9ºC in July to 24.6ºC in December.

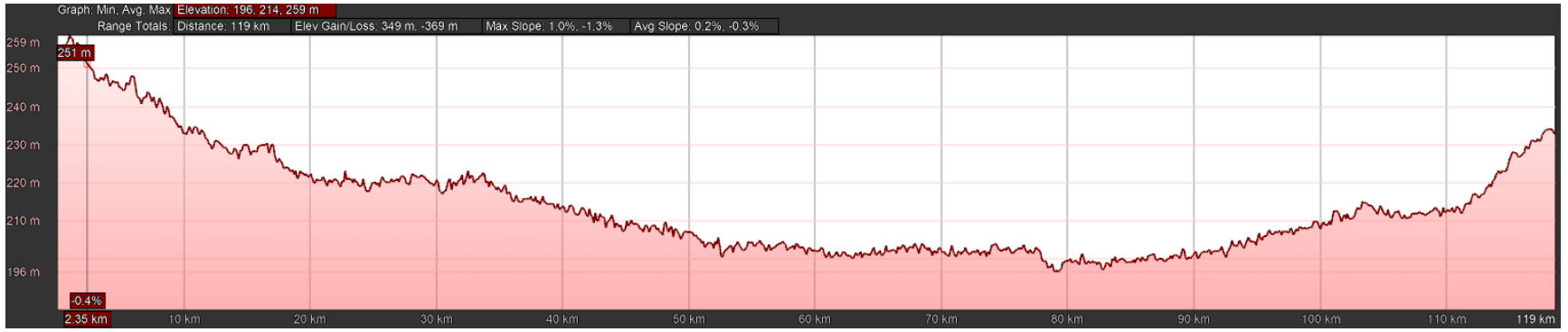
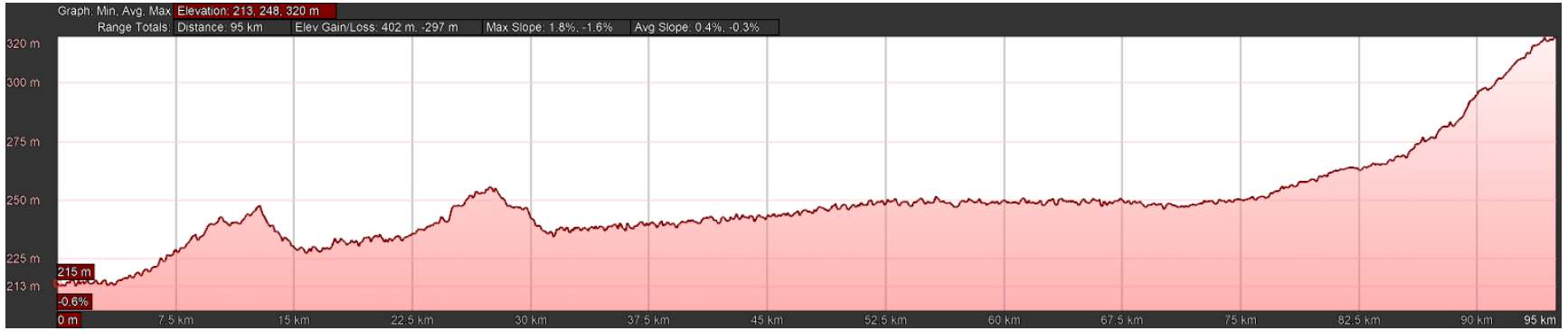
3.2 Topography and bioregions

The Project area occurs within three bioregions – Ord River Plain, Tanami and Sturt Plateau. The majority of the Project area occurs within the Ord River Plain bioregion which is characterised by scattered hills and plains, with sparse trees and short to medium grass layer (Baker et. al. 2005). The adjacent Sturt Plateau is characterised by gently undulating plans with *Eucalypt* woodlands with tussock grasses and areas of *Acacia* thickets and bull waddy woodlands (Baker et. al. 2005). The Tanami is mainly comprised of desert sandplains with small areas of exposed hills and ranges, supporting mixed shrub steppes, shrublands and hummock grass communities (Baker et. al. 2005).

3.2.1 Elevation profiles

Elevation profiles for each line have been created for using Google Earth Pro (see Table 3-1). See section 5 for specific lengths and slopes).

Table 3-1. Elevation profile for each proposed seismic line (using 50m contour intervals)

Line 03B (cross-section south to north) (positioned within bushland)	
Line 06C (cross-section east to west) (positioned within bushland)	

3.3 Hydrology

3.3.1 Catchments and water crossings

The Project area occurs within the following River Basin catchments – Wiso Basin and Victoria River. There are a very few waterways within the Project area. The main watercourse in the region is the Victoria River draining to the North, which the project area avoids. All watercourses (apart from the Victoria River) only flow after heavy rainfall events that typically occur during the Wet season.

Waterway crossings relevant to the Project area are described as follows:

- Line 03B intersects two indistinct drainage lines that support arid zone riparian vegetation (WC1 and WC2). These drainage lines support relatively open canopies, do not have formed banks and are ephemeral with no permanent (or semi-permanent) waterholes. They are only expected to contain water for short periods during the wet season. Gilgai features are present at one site on line 03B. Gilgai are temporary wetland features and are considered as important habitat.
- The eastern part of line 06C intersects one indistinct drainage line that supports arid zone riparian vegetation (WC3). This drainage line does not have formed banks and is ephemeral with no permanent (or semi-permanent) waterholes observed; it is only expected to contain water for short periods during the wet season.

Table 3-2. Summary description of riparian vegetation and waterway crossings in 03B and 06C

Water crossing ID	Site ID (ecology report)	Line	Description	Photograph
WC1	18	03B	Flood-out drainage associated with Cattle Creek. Narrow shallow ephemeral drainage No banks; gentle slope Heavy clay soils; cracking in parts. Numerous gilgai present in the flood-out area to south of drainage. Low open woodland with patchy to open shrubs over tussock grass. Tree species: *Corymbia terminalis, Eucalyptus pruinosa, Terminalia platyphylla, C. flavescens, Bauhinia cunninghamii* Shrub species: *Eucalyptus pruinosa, Acacia holosericea, Hakea arborescens, Carissa lanceolata, Ehretia saligna*	 
WC2	21	03B	Narrow shallow ephemeral drainage; No banks; gentle slope Sandy red earth soils (tertiary sediments). Low sparse woodland with sparse shrubs over tussock grass. Tree species: *Eucalyptus coolabah, Corymbia terminalis, Ventilago viminalis* Shrub species: *Eucalyptus pruinosa,* *Acacia sericophylla, Carissa lanceolata, Atalaya hemiglauca, Vachellia farnesiana*	 
WC3	55	06C	Flood-out drainage associated with Hooker Creek. Broad shallow drainage floor; no banks. Heavy brown loam soils. Low open woodland with sparse shrubs over hummock grass. Tree species: *Eucalyptus coolabah, Corymbia terminalis, C. flavescens, Bauhinia cunninghamii* Shrub species: *Ehretia saligna, Owenia reticulata, Grevillea refracta (?), Carissa lanceolata, Acacia lysiphloia*	 

3.3.2 Wetlands and waterholes

Two wetland features of local/regional significance were identified within or close to the Project area and are summarised below:

- **Soakage/waterhole**. A soakage was recorded at the northern end of line 03B, which is approximately 250m from the proposed seismic. Landforms such as these are considered to be important habitats in semi-arid Australia (Duguid et al. 2005).
- **Gilgai**. Gilgai formations were recorded at one site on line 03B (photographs in Figure 3-1; shown in Figure 3-2). Gilgai are small, ephemeral lakes/depressions in expanding clay soils. Gilgai size ranged from 4 m^2 to 20 m^2 and were scattered within the alluvial zone of the drainage line. Gilgai were dry at the time of survey and contained heavy clay soils with a dense cover of senesced Nardoo (likely Common Nardoo, *Marsilea drummondii*). Gilgai are considered to have local significance in semi-arid Australia (Duguid et al. 2005).

Figure 3-1. Photograph of gilgai recorded on line 03B

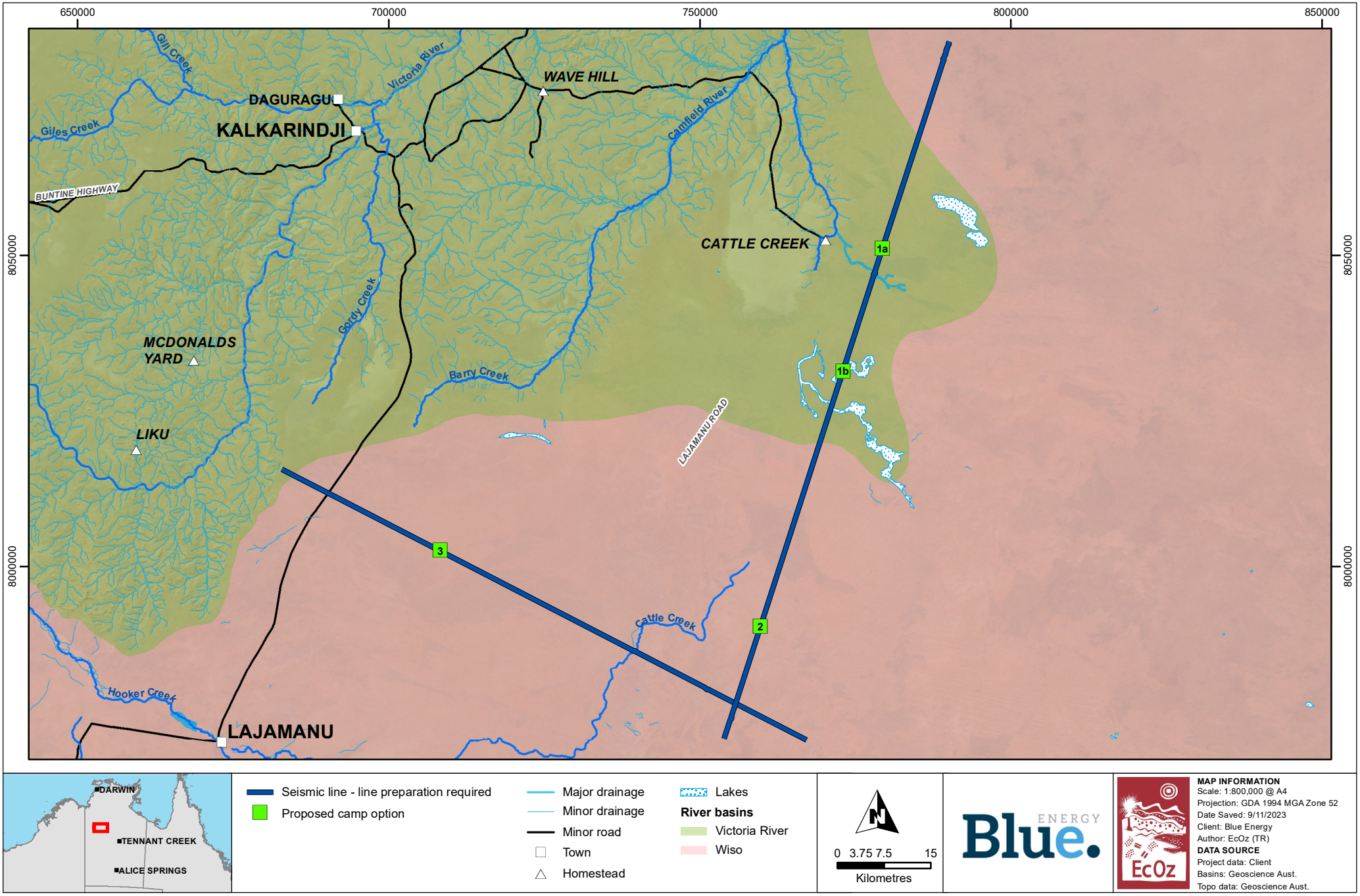


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Figure 3-2. Map of River Basin catchments and watercourses in the region of the Project area

3.4 Land systems

Land system mapping is available within the region at a scale of 1:1,000,000 (Stewart et al. 1970). The proposed seismic lines intersect five land systems (summarised in Table 3-3; mapped in Figure 3-3). Seismic lines 03B and 06C are situated within plains and rises land system classes (desert sandplains, lateritic plains, limestone plains).

Table 3-3. Summary of the land systems relevant to the proposed seismic program

Land system	Landform	Soil	Vegetation	Project area
Desert sandplains				
Redsan R(o)	Undulating plains comprising of gentle slopes, low crests, and shallow linear depressions.	Deep sandy soil predominantly deep red or deep yellow in colouration, superimposing laterised Lower Cretaceous sediments and lacustrine sandstones.	Sparse low woodland dominated by *Corymbia polycarpa, Eucalyptus argillacea, Corymbia setosa*, *Eucalyptus microtheca,* and/or *Corymbia ferruginea*. The understorey is typically comprised of hummock grassland (*Triodia pungens*) or *Aristida pruinosa*.	Line preparation (lines 03B, 06C)
Desert dunefields				
Atlas_B32 B32	Dune fields of parallel linear dunes, reticulate dunes and/or irregular dunes.	Red siliceous sands of the dunes which have stable flanks and partially mobile crests. Some sands in the swales and narrow valleys have areas of calcrete and gypsum deposits.	Not available	Line preparation (line 03B)
Limestone plains and rises				
Barry Ba(o)	Gently sloping undulating dunes.	Mainly brown sandy loam transitioning into dark red clay, with areas of grey sandy loams transitioning into yellow clay. Limestone outcrops are uncommon.	Predominantly shrubland (or sparse low woodland) with *Triodia pungens* the dominant understorey species. Arid short grass (*Enneapogon* spp.) may also be present.	Line preparation (line 03B)
Lateritic plateaux				
Franklin Fr	Rugged, hilly terrain with flat-topped peaks and small gullies. Small dissection scarps, stream channels, valley floors, and gentle slopes are present in some areas.	Predominantly shallow reddish soils superimposing laterised sediments and volcanics. Red brown clay loam, grey cracking clay, brown cracking clay, and brown loam transitioning into dark red clay can also be observed. Ferruginous gravel is present throughout.	Low woodland characterised by *Eucalyptus brevifolia and Triodia pungens* association. *Corymbia terminalis* and *Corymbia dichromophloia* may also constitute part of the overstorey. *Themeda australis* and *Sorghum australiense* are present on the upper and lower slopes, whilst *Astrebla pectinata* and *Aristida latifolia* can be observed on the valley floors.	Line preparation (line 06C) Although line only present on plateau; section through escarpment has been abandoned due to step terrain and associated risks.
Elevated plateaux surfaces				
Geebee G(o)	Undulating slopes comprising mostly of upper slopes and crests. Gentle lower slopes and shallow linear depressions with stream lines may also be present.	Red-brown clay loam overlying laterite, with gravel interspersed throughout. Some areas contain brown or grey sandy loam merging into dark red or yellow clay.	Sparse low woodland, typically comprising of *Eucalyptus brevifolia* or *Corymbia dichromophloia* (or occasionally *Eucalyptus pruinosa* or *Eucalyptus argillacea). Triodia pungens* is commonly observed.	Line preparation (line 06C)

3.4.1 Land type survey (ground-truthed)

A land type survey was undertaken as part of the Ecological Assessment using available resources (i.e. NVIS vegetation communities, land units, land systems, aerial imagery) and field observations to describe, map and evaluate land types for areas that will require vegetation clearing. Land type descriptions and mapping were completed for lines 03B and 06C, and for the proposed camp site options.

Seismic line 03B

Line 03B traverses seven land types (LT). The line mostly traverses flat to gently sloping plains, with scattered low rises (calcrete or laterite) and drainage/alluvial areas (associated with Cattle Creek). The northern parts are dominated by red earth plains (LT-1) and sandplains (LT-2 and LT-3); central parts are dominated by limestone plains and rises (LT-4) and alluvial / drainage areas (associated with Cattle Creek) (LT-6 and LT-7); and southern parts are dominated by lateritic plains and rises (LT-5).

Erosion risk is considered as low to moderate for all land types.

Seismic line 06C

Line06C traverses seven land types (LT). Line 06C mostly traverses flat to gently sloping sandplains (LT 2) and laterite plains (LT 5), with minor drainage features (LT 6, 7 and 8) and lateritic plateau (land type 9). Erosion risk is considered to be low to moderate for all land types and will require erosion and sediment control planning to minimise gully erosion along cleared lines.

Camp site options

General descriptions and photographs for camp site options are provided in within the EMP, however for the assessment of the erosion risk and hazard, a conservative approach has been taken across the board in the assessment.

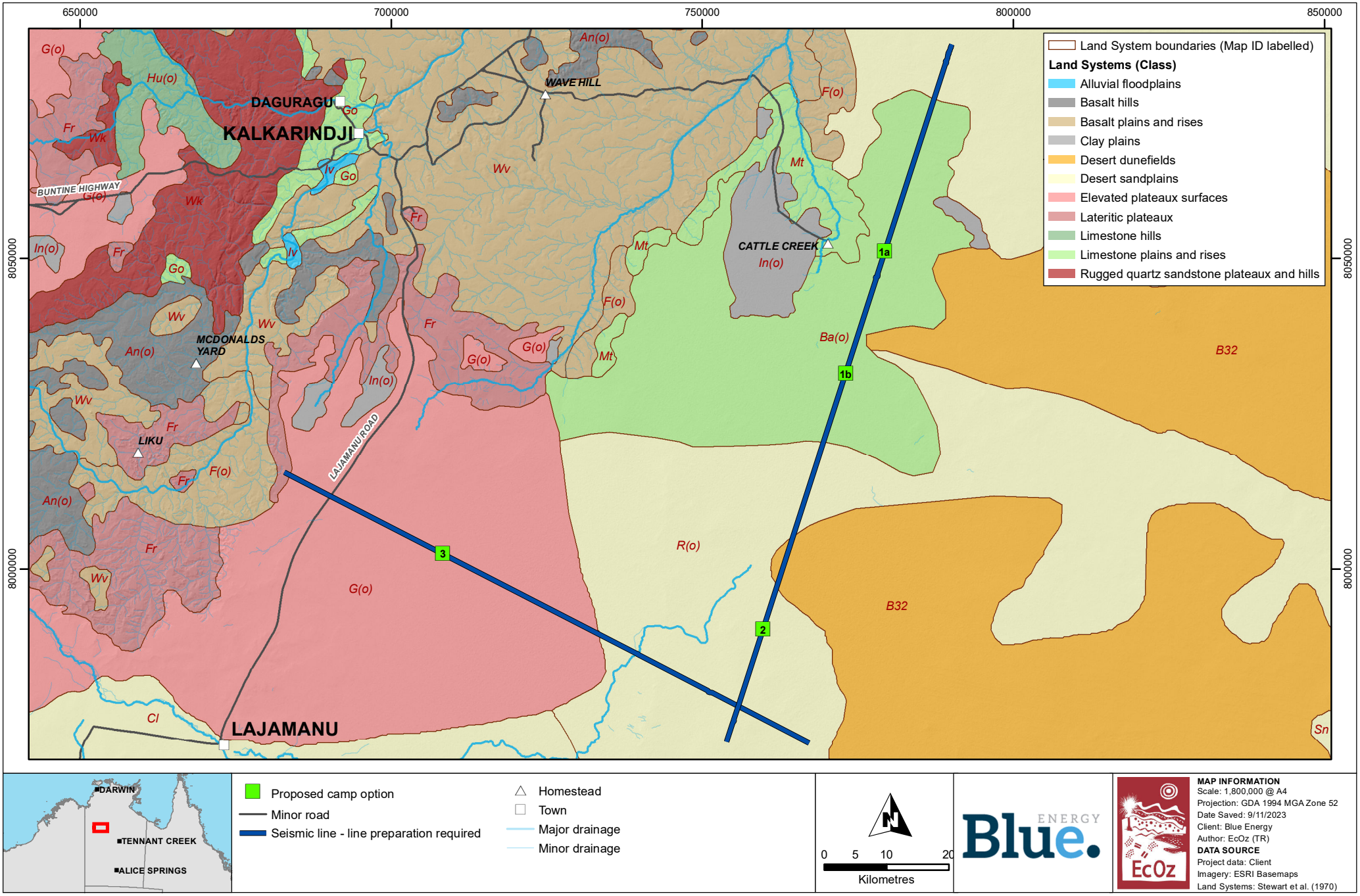

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Figure 3-3. Map of land systems

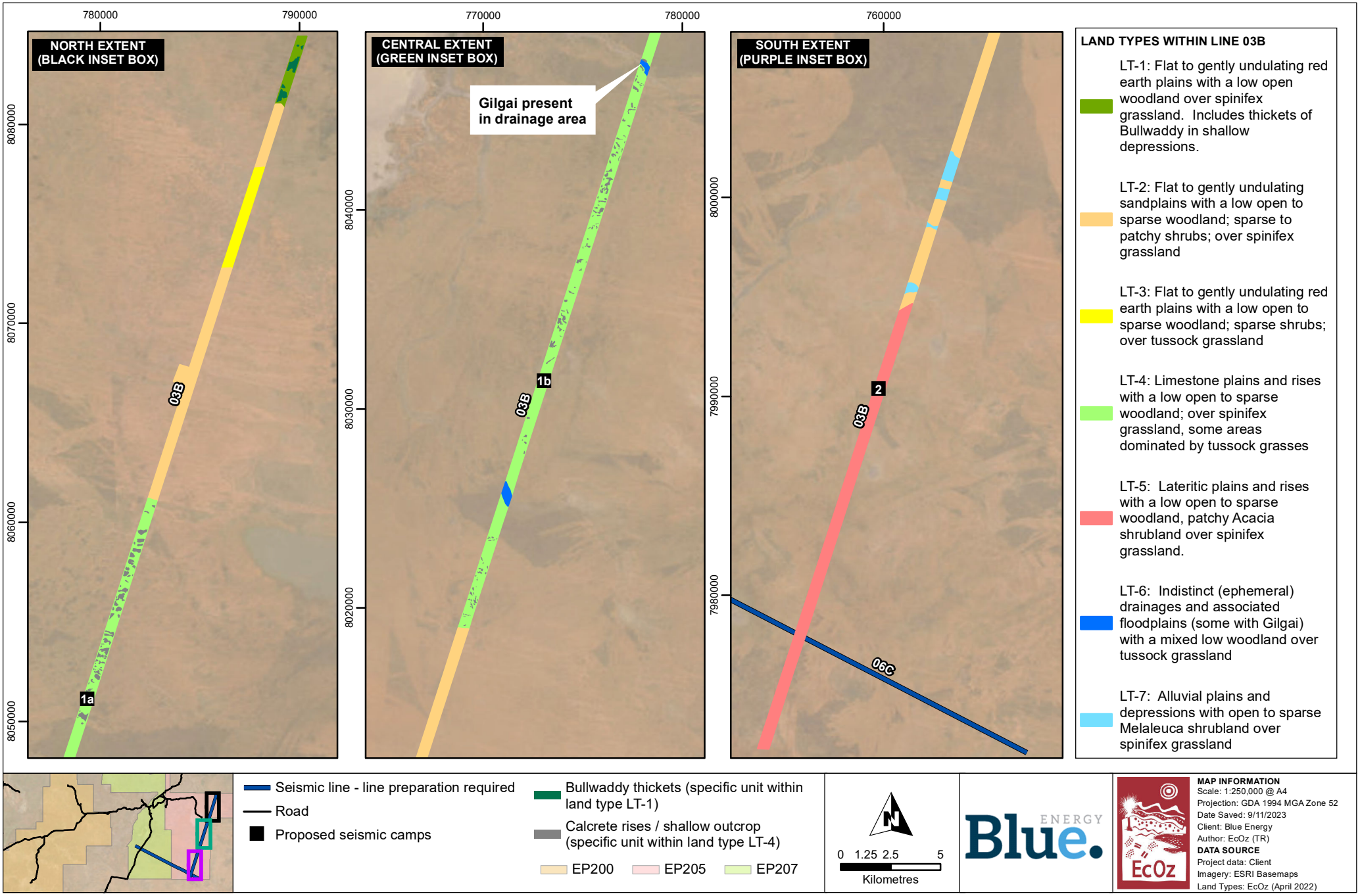

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Figure 3-4. Map of land types within seismic line 03B

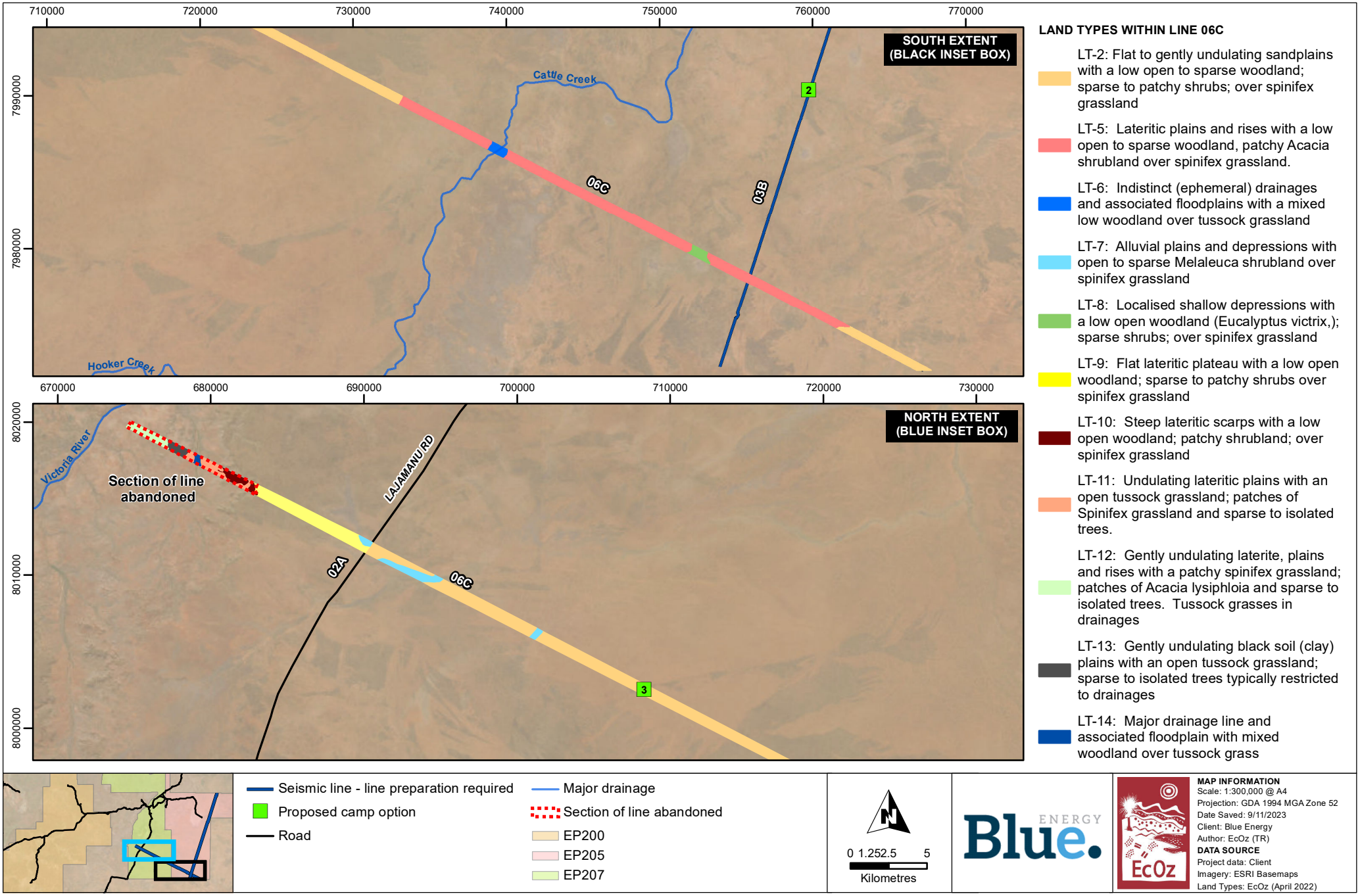

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Figure 3-5. Map of land types within seismic line 06C

4 EROSION AND HAZARD RISK

Inputs and equations used to assess erosion hazard and risk for the project area are detailed in the sections below.

4.1 Erosion hazard

Erosion hazard is assessed using the Revised Universal Soil Loss Equation – RUSLE (IECA 2008). This is commonly used to predict the long term, average, annual soil loss from sheet and rill erosion under specified management conditions. The RUSLE is represented by the following equation:

A = R * K * L * S * P * C, where:

Factor	Description	Value	Comment
A	estimated soil loss (tonnes/ha/yr)	variable	As calculated per catchment
R	rainfall erosivity factor	3,004	Based on BoM IFD for BoM weather station Wave Hill (station number 014840) (0.5EY, 6 hr = 11.8 mm/hr)
K	soil erodibility factor	0.053	0.053 adopted – silty gravels, poorly graded gravel, sand, silt (Section 4.1.2)
LS	slope length/gradient factor	variable	Based on catchment characteristics. (Section 4.1.3)
P	erosion control practice factor	1.3	Construction phase condition (Section 4.1.5)
C	ground cover and management factor	0.37-0.64	Based on proposed surface cover. (Section 4.1.4)

4.1.1 Rainfall erosivity (R-factor)

The rainfall erosivity factor (R-factor) is a measure of the ability of rainfall to cause erosion. It is a product of two components: total energy (E) and maximum 30-minute intensity for each storm (Landcom 2004). Due to the remote location of the project, an appropriate R-factors have not been predetermined for the region therefore it can be calculated using the annual R-factor calculations as per the IECA (2008) :

$$R = 164.74\ (1.1177)^{S}\ S^{0.6444}$$

Where S is the 2 year ARI, 6 hour rainfall event [mm]

(since the ARR2019 update, the 2-year ARI, has now been changed to the 0.5EY AEP)

According to BoM, for the project area S is determined to be 11.8 mm/hour. Therefore, using the above formula, the adopted R-factor for the project is 3,004.

4.1.2 Erodibility (K-factor)

The K-factor is a numerical representation of the ability of soils to resist the erosive energy of rain (IECA 2008). Soil texture is the principal component affecting K, but soil structure, organic matter and profile permeability also contribute. As per IECA 2008 *Table E5 – Typical K-factors based on Unified Soil Classification System* and the most erodible soils likely to be encountered, a K-factor of 0.053 will be applied (silty gravels, poorly graded gravel, sand, silt).

Note that all other soils likely to be encountered have lower K-factors however the higher K factor has been adopted as a conservative measure.

4.1.3 Slope (LS-factor)

The LS-factor describes the combined effect of slope length and slope gradient on soil loss. The seismic lines will traverse topography up to 4 % slope. A summary of the lengths, average slopes and maximum slopes encountered across the seismic lines are provided below in Table 4-1. The maximum slope encountered (based off the Google Earth elevation feature), has been adopted as a conservative measure.

Table 4-1. Slopes across each seismic line

Line	Length	Average slope	Maximum slope
03B	119 km	0.2%	1.3%
06C	95 km	0.4%	1.8%

4.1.4 Cover and management factor (C-factor)

The cover and management factor is a measure of the level of soil surface protection provided by various groundcovers. It includes proportion of vegetation, rock, hardstand, paving, soil binders, matting and associated non-erodible material. The C-factor for the project will vary depending on stabilisation and management of surfaces exposed by construction and operation. C-factors for various surface covers are summarised in Table 4-2.

Table 4-2. Adopted C-factors

Surface type	% Cover	C-factor
Vegetation (highly variable)	25 - 80	0.37 – 0.025
Soil stabiliser (eg. Vital Bon-Matt HR or Bon-Matt RDS (S72))	80	0.025
Rock	80-100	0.025 - 0
95% compacted gravel/soil surface (eg. haul roads/pads)	25	0.37
Bare soil, erosive surface	0 - 20	1 - 0.44

4.1.5 Erosion control practice factor (P–factor)

The P-factor measures the combined effect of all support practices and management variables. It also represents structural methods for controlling erosion (IECA 2008). The nominated P-factor for all areas without permanent stable groundcover is 1.3 (based on the default construction phase condition).

4.1.6 Estimated soil loss

Potential soil loss calculations and associated erosion hazard for defined project areas are provided within Table 4-3. Note that individual calculations have been done for each of the seismic lines using the maximum slope encountered. Slope length is the maximum distance between whoa-boys (cross banks) on seismic lines tracking down gradient.

Table 4-3. Soil loss and erosion hazard

SOIL LOSS CALCS - ANNUAL				
Aspect	**Notes**	**Catchments**		
Stage (if applicable - i.e earthworks, construction, pre-rehab, post works)		**To be cleared**	**To be cleared**	**Camp area**
Site Catchment Areas		**06C - 95km**	**03B - 119km**	**0.8km**
Rainfall data				
Intensity: 2-yr, 6-hr storm **(NOTE - # The 0.5 EY design rainfall corresponds to the 2 year Average Recurrence Interval (ARI) IFD not the 50% AEP IFD.) Refer to screenshot to the right for settings to click to get 0.5EY**	http://www.bom.gov.au/water/designRainfalls/revised-ifd/	11.8	11.8	11.8
Latitude	Refer to Google Earth to get lat and long coordinates in decimal degrees	-17.39		
Longitude		131.12		
RUSLE Factors				
Rainfall erosivity - R	Value from IECA or the Darwin Harbour Advisory Committee Research Group OR calculated below			
Alternative R value if not provided, *where S is equal to 2yr, 6hr storm (above)*	*R = 164.74 (1.1177)^S * S^0.6444*	3004	3004	3004
Soil erodibility - K	IECA 2008 Table E5 – Typical K-factors based on Unified Soil Classification System.	0.053	0.053	0.053
Slope length (m) - L	Main length of section (ideally between 0-100m)	10	10	100
Slope gradient (%) - S	Calculated slope	2	2	2
Length/gradient (LS-factor)	Combined effect of slope and length	0.18	0.18	0.44
Erosion control practice - P		Compacted & smooth	Compacted & smooth	Compacted & smooth
Erosion control practice - P	The P-factor measures the combined effect of all support practices and management variables	1.3	1.3	1.3
Ground cover in disturbed catchment - %	Select percentage of groundcover for stage of works	10	10	10
Ground cover in disturbed catchment - C		0.64	0.64	0.64

SOIL LOSS CALCS - ANNUAL				
Aspect	**Notes**	**Catchments**		
Stage (if applicable - i.e earthworks, construction, pre-rehab, post works)		**To be cleared**	**To be cleared**	**Camp area**
Site Catchment Areas		**06C - 95km**	**03B - 119km**	**0.8km**
Sediment Storage Zone				
Soil Loss (Tonnage Rate) t/ha/yr		24	24	58
Soil Loss (Volume Rate) m3/ha/yr		18	18	45
Soil Loss Class		1	1	1
Sediment Control Type (minimum)	**Type 1** - >150 t/ha/yr **Type 2** - 75 - 150 t/ha/yr **Type 3** - 0 - 75t/ha/yr	**Type 3**	**Type 3**	**Type 3**

4.2 Erosion risk

Erosion risk refers to the evaluation of the "risk" of soil erosion when consideration is given to both the degree of erosion and the likelihood of the erosion occurring (IECA 2008). In the absence of a site specific risk assessment procedure, erosion risk rating is determined from the average monthly rainfall depth at Wave Hill (station number 014840) (Table 4-4).

Erosion risk ratings range from very low for the dry season (Apr – Oct), moderate in the early wet (Nov), then high for the wet season (Dec – Mar).

Table 4-4. Monthly erosion risk rating (based on Wave Hill ID 014840)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainfall depth (mm)	146.8	164.6	116.1	16.6	8.0	3.8	4.8	1.4	12.3	26.9	55.7	113.9
Rating	High	High	High	Very Low	Very Low	Very Low	Very Low	Very Low	Very Low	Very Low	Mod	High

4.3 Erosion and sediment control requirements

Recommended erosion and sediment control measures are based upon the soil loss calculations (Table 4-3) and monthly erosion risk (Table 4-4). The reliable and prolonged dry season (May to September) provides a low risk of erosion from rainfall throughout these months, although wind erosion potential (dust) is significant.

It is essential that erosion and sediment control measures are fully implemented prior to the 1 October in preparation for the wet season. Table 4-5 summarises erosion and sediment control requirements for all stages of civil construction and operation across a full calendar year. Typical measures to be implemented during works are discussed in Section 5. Additional specific design, timing and location are to be provided within Progressive ESCP's and associated engineering drawings.

Table 4-5. Erosion risk and ESC requirements during construction

Erosion Risk Rating	Monthly Rainfall Depth	Period	Erosion & Sediment Control Requirements
Very low	0 to 30mm	Apr - Oct	• ESCs not required for activities which do not disturb groundcover • Unfinished earthworks are suitably stabilised if rainfall is reasonably possible • Sediment control to be installed around areas of erosion risk prior to 1st October (wet season commencement)
Moderate	45+ to 100mm	Nov	• Areas of erosion risk protected within 20 days completion (or cessation) of earthworks or inactivity [1] • Sediment control fully installed & maintained
High	100+ to 225mm	Dec - Mar	• Areas of erosion risk protected within 10 days completion (or cessation) of earthworks or inactivity [1] • Sediment control fully installed & maintained
Notes:	[1] Areas of erosion risk may be protected using the following types of cover: hardstand, soil binder (eg. polymer), placement of mats, blankets (eg. geotextile, jute) or vegetative cover (min 75% for all areas, with min 90% for drainage channels).		

5 EROSION AND SEDIMENT CONTROL - SPECIFIC AREAS AND ACTIVITIES

5.1 Site roads/access

Project access is to be via existing pastoral tracks and highways. Existing tracks and seismic lines will be utilised wherever possible.

Access road design include the following:

- 6 – 8 metre carriage width
- Formed with 4% side-slope
- Minimum 200 mm surface coarse, compacted to 95% MMDD
- Drainage (table drains and mitre drains)

Access roads are to be constructed and maintained consistent with the following principles (refer to Appendix A for ESC design detail).

5.1.1 Route selection

Consideration will be given to the following when selecting routes:

- Reuse existing access roads wherever possible
- Minimise disturbance to soil and vegetation
- Minimise the number of watercourse and drainage line crossings
- Reduce the catchment area above the road by locating the road along a ridge or as high as possible on side slopes
- Locate roads to avoid:
    - Steep cross-slopes
        - High erosion hazard soils
    - Areas of riparian vegetation
        - Perched water tables, swamps, or areas of poor drainage
    - Unstable geology, steep topography or rock outcrops.

5.1.2 Design and construction

Consideration will be given to the following when designing and constructing access:

- Roads are to be graded to a crown, or with crossfall drainage.
- Watercourse crossings and associated approaches are to be protected from erosion.
- Road runoff to be directed to stable outlets (vegetated or rocky areas).
- Upon completion of construction, roads no longer required are to be ripped, topsoiled and revegetated (returned to the pre-disturbance condition).

5.1.3 Cross banks

Where access road runoff cannot be adequately controlled by cross fall drainage (e.g. Observation of rills along road surface), construct cross banks consistent with the following:

- Interval spacing based on contributing catchment area, length of slope and site observations.
- Level outlets, enabling discharge of runoff into undisturbed areas (not directly into watercourses).
- 300mm consolidated effective height, 2-3m crest width.
- Cross drains (excavated dished drains) may be used for low road grades in place of cross banks.

5.1.4 Drainage

V-shaped drains, with regular discharge to mitre drains, are proposed for upgraded access road sections. This design requires significantly less clearing than alternative profiles (eg. trapezoidal); and suits the construction methodology (ie. grader). Drainage will incorporate check dam controls (eg. rock check dam, filter bag/tube) to provide flow energy dissipation in addition to providing sediment control.

A regular monitoring regime is to be implemented with additional controls implemented if erosion is identified. This may include additional check dams, application of suitable soil binder, or upgrading of drainage profile (subject to project approvals).

5.2 Vegetation clearing

Vegetation clearing associated with exploration activities is to be undertaken in accordance with applicable approvals. Clearing methodology is to incorporate the following:

- Clearing activities to be implemented consistent with the NTG Land Clearing Guidelines (DENR 2019).
- Vegetation clearing shall be kept to the minimum amount necessary to allow access and/or approved activities.
- Areas of protected vegetation and significant areas of vegetation are to be retained, and must be clearly identified prior to the commencement of clearing.
- AAPA Restricted Works Areas (RWAs) will be avoided by the program. AAPA certificates for the Project indicate there are no RWAs in close proximity to line to be cleared (lines 03B and 06C), and therefore no specific erosion control measures are required.
- Approved areas for native vegetation clearing to be clearly identified.
- Previously cleared areas shall be utilised where possible for laydown and turn around points.
- Disturbance to natural watercourses and associated riparian zones must be limited to the minimum practicable.
- Cleared vegetation is to be retained and reused in site rehabilitation wherever possible.

5.3 Topsoil & spoil management

Earthworks are to incorporate the stripping and preservation of topsoil for reuse. The depth of topsoil stripping is dependent upon soil type, however ideally the top 50 mm should be retained separately from other material (contains most of the biological activity and nutrients required for successful rehabilitation).

Topsoil is to be stripped and stockpiled as a bund along the perimeter of the lease pads (inside the cleared vegetation windrow where present). This enables separation of clean and dirty stormwater runoff, in addition to allowing for progressive rehabilitation.

Where additional stockpile sites are required, these areas will be located and constructed as follows:

- Located at least 5 m from existing remnant vegetation, minor flow lines and hazard areas.

- Constructed along the contour as low, flat elongated mounds.
- Topsoil stockpiles are to be constructed less than 2 m in height where available space allows.
- Protected upslope by earth diversion banks to divert run-on water and downslope by either mulch, sediment fence or similar Type 3 sediment control.

5.4 Ancillary areas

Ancillary areas include temporary infrastructure required to support the construction program and include construction accommodation camps, site compounds, lay-down areas, turn-around points and above ground facilities.

The erosion and sediment control principles and strategies discussed within this document will equally apply to all ancillary areas.

5.5 Rehabilitation of cleared areas

After survey activities are complete, all tracks should be scouted to identify potential erosion zones. These locations should be rehabilitated by ripping the site perpendicular to flow direction and scattering large timber, increasing roughness and encouraging revegetation. This also minimises concentration of water flow during rainfall events – which can cause severe rilling and gullying.

Rehabilitation of the seismic lines should occur as soon as possible to prevent these lines becoming preferred walking trails for cattle, which, if allowed to travel along the lines will damage soil structure and may cause / accelerate erosion.

5.6 Seismic profiling

Seismic profiling is described within Section 2.3.1. The seismic method uses vibrator trucks to gather data. Due to varying terrain, the line preparation is usually undertaken by a dozer/grader and a light 4WD vehicle, adopting the following methodology to ensure minimal ground disturbance:

- Seismic lines will be located to avoid requirement for ground disturbance within riparian areas (eg. watercourse crossings).
- The dozer will ‘walk’ with the blade up in easily traversable terrain, with the marks of the dozer tracks being sufficient for the surveyors and recording crew to follow.
- The dozers will not be utilised in areas where riparian vegetation is present or within the significant hydrological features such as wetlands and gilgais.

5.7 Watercourse crossings

Where access roads or tracks are required to cross watercourses, the crossings are to be bed level crossings, constructed flush with the existing invert level of the specific watercourse. Crossings will incorporate a stable rock base, hardstand approaches and flow diversion berms (to shed road runoff), designed to be stable in a 1 in 1 year event. Seismic lines that cross watercourses are to be as low impact as possible with minimal or no use of blades.

Roads crossing waterways are to be constructed in accordance with the following requirements:

- Temporary stockpiling of soil, equipment and materials within watercourses, or on adjacent banks and floodplains, is to be avoided (unless integral to drainage control requirements).
- Where possible, crossings should be constructed at right angles in locations where the stream is straight.

- Access road runoff is to be prevented from directly entering the watercourse by construction of flow diversion banks (rollovers) immediately upslope to divert flow.

All drainages should be clear of cleared soil and debris to enable natural flow of water, because if drainages are blocked or impeded, erosion may occur, or the material will be lost (and therefore unavailable for post survey rehabilitation activities). Therefore, the method to create access ramps at creek crossings is described and illustrated below:

- Select crossing where bank is lowest, avoiding trees and dense vegetation (if possible).
- Construct **ramp by pushing material away from the creek bank** (i.e. don't push material into the creek).
- Build a cross bank (using the pushed up material) at the top of the ramp. This directs water away from the ramp, reducing the chance of gully erosion development if rainfall occurs prior to rehabilitation.
- Ramp to be constructed at right angles to direction of flow.
- These techniques are to be undertaken on both approaches of the creek.

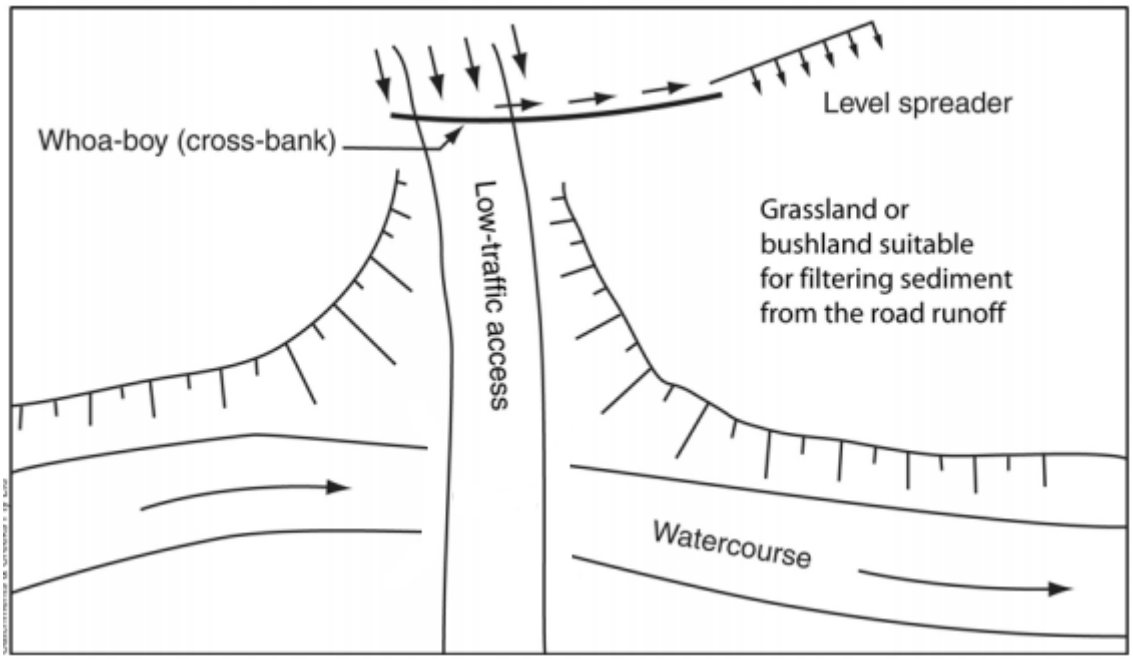

Figure 5-1 Construction technique for water crossing taken from IECA (2008)

Rehabilitation should involve pushing and compacting material (used to make the low bank) back to its original position. If available, spread any surface vegetation that was removed for the creation of the ramp (as this will help reduce surface water velocity).

6 SITE STABILISATION

Following the completion of project activities, long-term protection of the site from erosion will be provided by appropriate cover, typically vegetation. Blue Energy may request approval to undertake additional exploration activities following the completion of the activities covered under this ESCP (which would require an updated ESCP and applicable approvals). Consequently, permanent stabilisation and rehabilitation will depend on exploration outcomes and the potential for reservoir development.

Photo points (geo-referenced) will be established to provide a balanced representation of the ground condition and various landform and vegetation types encountered, and enable rehabilitation success to be effectively monitored. The process is repeated after the seismic program is completed. The revisit intervals are proposed immediately after rehabilitation works have been completed post decommissioning, following the first wet season, one year after rehabilitation works, and three years after rehabilitation (although the return period is determined by weather/road conditions and current activity in the region). Revisits may also be targeted, with emphasis on sensitive areas and areas potentially subject to erosion such that environmental impact of re-accessing remote locations is minimised in consultation with, and on the advice of, an independent environmental consultant.

Subject to landholder agreement and further exploration activities requiring utilisation of the infrastructure covered under this ESCP, stabilisation of the project area will incorporate the following practices:

- Progressive rehabilitation of disturbed areas (timing of progressive rehabilitation will depend on exploration outcomes and the potential for reservoir development and production).
- Management of topsoil to ensure preservation of its long-term value.
- Removal of all rubbish and waste.
- Removal of above ground infrastructure so that in the event the civils works rehabilitation such as the reprofiling of access roads can occur unimpeded.
- Lightly scarifying or rolling all disturbed areas to break up consolidated surfaces.
- Spreading of stockpiled topsoil material and trees, shrubs and grasses across the lease pad and areas not needed for future monitoring and maintenance.
- Selected plant species for revegetation are appropriate for site conditions and endemic to local vegetation communities.
- Erosion and sediment controls are to remain in place until minimum 70 % self-sustaining groundcover (or groundcover % consistent with adjacent undisturbed areas) is achieved for disturbed areas.

7 MANAGEMENT AND IMPLEMENTATION

This ESCP provides a framework for managing erosion and sediment issues for the exploration activities as detailed within the Project EMP.

7.1 Responsibilities

Key personnel roles and responsibilities are detailed within the EMP and summarised in Table 7-1 below.

Table 7-1. Key personnel roles and responsibilities

Role	Responsibility
Project Manager	Ensure overall compliance with the EMP. Ensure relevant environmental legislative requirements, performance outcomes, performance standards, measurement criteria and requirements in the implementation strategy in this ESCP are communicated to the activity key personnel; and audited. Undertake consultation with relevant persons throughout project planning and implementation. Document consultation with relevant persons. Ensure any commitments to relevant persons are undertaken
Civil Construction Superintendent	Ensure adequate resources are in place to meet the requirements within the EMP (i.e. implement relevant management plans such as this ESCP) Undertake environmental checks / inspection as described within the EMP Ensure incidents and non-conformances are managed as per EMP Report environmental incidents to the Project Manager and ensure reporting and investigations are undertaken. Ensure records and documents are managed so they are available and retrievable. Ensure non-conformances identified are communicated and actions completed.

7.2 Training and awareness

Blue Energy staff and contractors undertaking work in the field are required to undertake an induction process. At a minimum, the induction will cover:

- Activity description
- Environmental impacts and risks; and associated controls to be implemented
- Roles and responsibilities
- Incident and non-conformance reporting and management

7.3 ESC installation and maintenance

The installation and maintenance of all ESC measures is to be overseen by a suitably qualified person. Installation is to be consistent with this ESCP and any associated progressive ESCP's.

All required temporary erosion and sediment control measures must be fully operational and maintained in proper working order until permanent stabilisation is achieved. If ESCs are observed to have reduced capacity, damage or insufficient effectiveness, they are to be repaired, improved or substituted as follows:

- Identified soil erosion areas are to be resolved as soon as possible, with additional control measures implemented to prevent recurrence.
- All sediment control devices (other than sediment basins) must be de-silted and made fully operational as soon as reasonable and practicable after runoff-producing rainfall, or if the

sediment retention capacity of the device falls below 75% of the design retention capacity (IECA 2008).

- Sediment removed from areas of deposition is to be incorporated within subsoil stockpile areas and/or buried on-site.

Spare materials including geo-fabric, sediment fence material, mulch and rock are to be stored on-site to enable repairs to be conducted within a short timeframe.

7.4 Monitoring & reporting

ESC measures will be inspected in accordance with the EMP, including:

- weekly during dry season work activities
- daily during wet season work activities
- as soon as reasonably practical after receiving significant rainfall events (i.e. >10 mm in 24 hr period).

Visual assessment will be carried out of surface water runoff structures, drainage structures and erosion control structures to ensure they are operating efficiently.

Environmental objectives and targets for erosion and sediment control are to be documented in the EMP. Where monitoring identifies environmental objectives are not being achieved, corrective actions will be enacted. If significant erosion is recorded, a CPESC will be engaged to advise on suitable controls.

7.5 Updates and variations

ESCP's are dynamic documents, typically requiring updating as construction and operational stages progress and site characteristics alter. Any alterations to the implementation of erosion and sediment controls within specific areas will be recorded and outlined in progressive ESCP's. This may include the following scenarios:

- Controls require alteration due to change in work practices or new stage of works is commenced.
- Controls require alteration due to change in seasonal conditions (e.g. dry season vs wet season).
- Changes occur in slope gradients and drainage paths, with their exact form unpredictable before works start.
- A change in the project design occurs that potentially impacts on ESC requirements.
- The desired outcome (e.g. protection of receiving environments) is not being achieved.

8 REFERENCES

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APPENDIX A TYPICAL ESC MEASURES

TYPICAL DESIGNS

Rock Check Dam (RCD) & Rock Filter Dam (RFD)

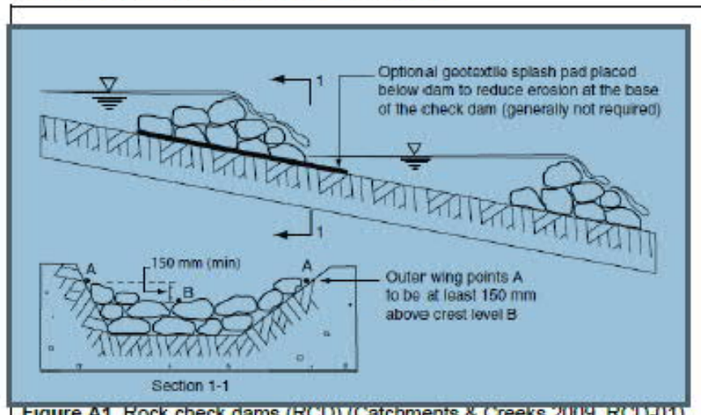
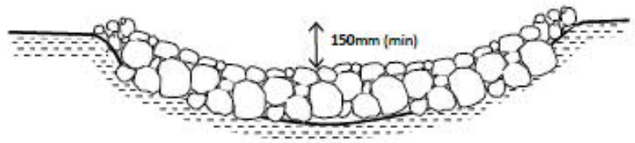


Figure A1. Rock check dams (RCD) (Catchments & Creeks 2009, RCD-01)



Notes:

- Rock to be clean (zero fines), sized 150-300mm (approx.)
- RCD to be extended up the channel bank to prevent outflanking
- RCD to be constructed with 150mm invert
- RCD may be installed as outlet incorporated within mulch berm (MB) and/or earth berm (EB).
- RCD to be covered with geotextile where indicated

Figure A2. Rock check dam (RCD) – typical design

Notes:

- Rock to be clean (zero fines), sized 40-75mm (approx.)
- RFD height 400 mm min
- RFD to be wrapped in geotextile (Bidum® A14 equivalent)
- RFD may be installed as outlet incorporated within mulch berm (MB) and/or earth berm (EB).

Figure A3. Rock filter dam (RFD) – typical design

Mulch Berm (MB) & Earth Berm (EB)

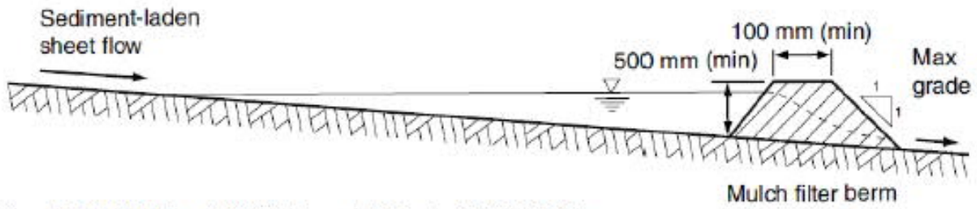


Figure B1. Mulch Berm (MB) (Catchments & Creeks 2009, MB-01)

Notes:

- Design adopted from Catchments & Creeks (2010) *Mulch Filter Berms MB-01.*
- Berm to be located within the property boundary, preferably along the contour, and away from areas of concentrated flow
- Ends of berm to be turned up to minimise risk of flow bypassing around the ends

Notes:

- EB constructed from topsoil whenever material is available
- EB to be protected from erosion (vegetation, soil binder, blankets or matting)

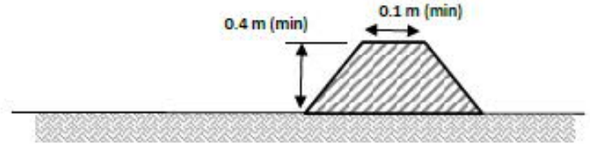


Figure B2. Earth Berm (EB)

Sediment Fence (SF)

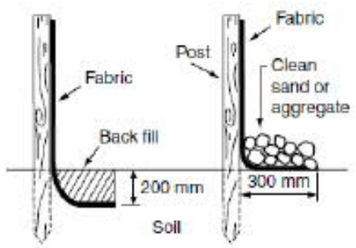


Fig C1. Sediment fence anchoring (Catchments & Creeks 2009, SF-01)

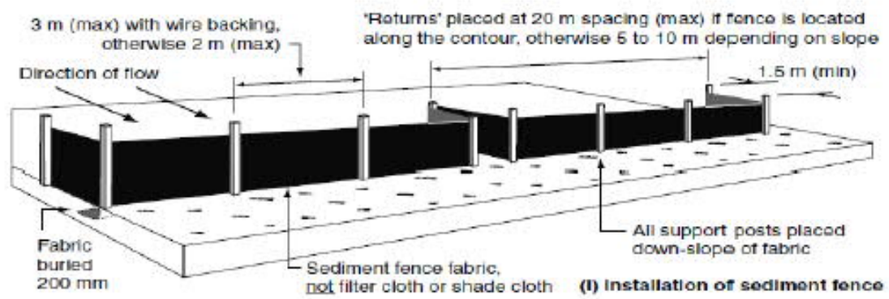


Fig C2. Sediment fence installation (Catchments & Creeks 2009, SF-01)

Revision	Date	Drawn	Approved		Description
1	15/12/22	AF	EL		Sent to client

PREPARED BY:

ENVIRONMENTAL CONSULTANTS TERRITORY PROUD

PREPARED FOR:

Blue Energy.

Primary ESCP Typical Designs

Period: TBC

NOT TO SCALE | REVISION:1

TYPICAL DESIGNS

Cross drains/banks

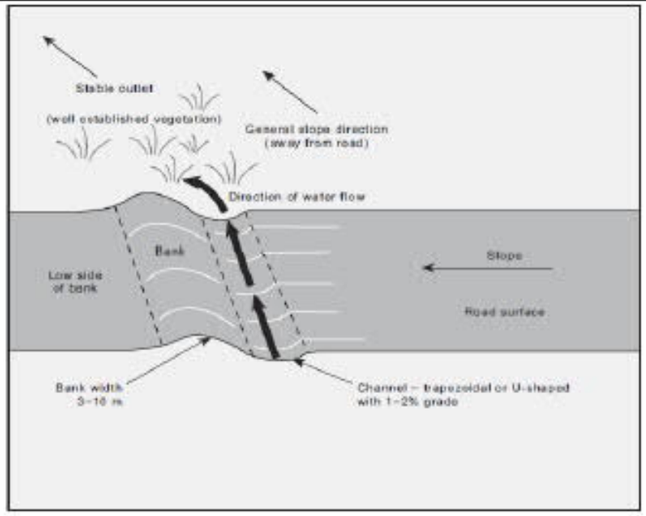


Figure D1. Typical Cross Bank Construction (DECC 2008, modified from Beatty 1995)

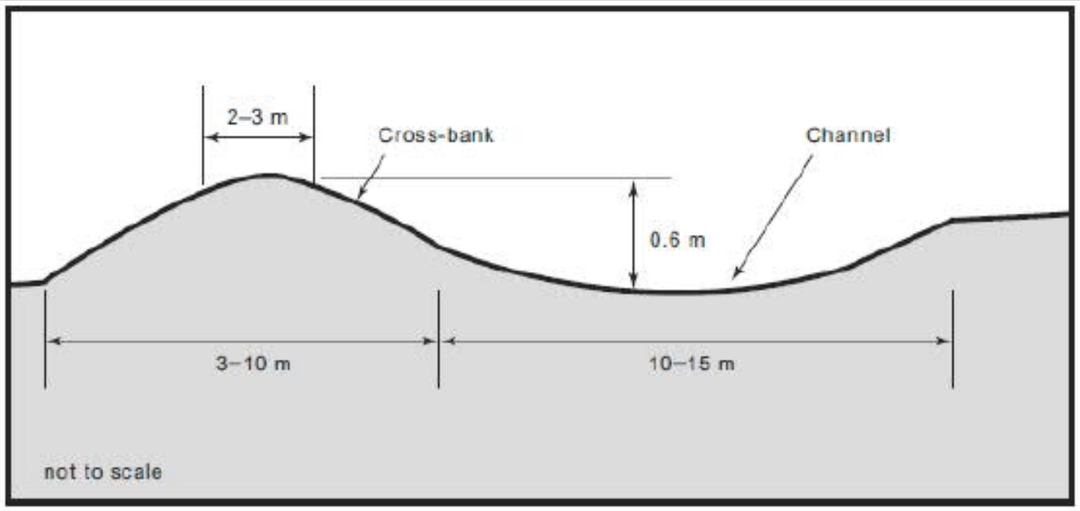


Figure D2. Typical Cross Bank – Cross Section (DECC 2008, modified from Beatty 1995)

Table D1. Maximum distance of water flow along road surfaces

Road grade (%)	Maximum distance (m)
< 2	250
2 - 5	150
6 - 10	100

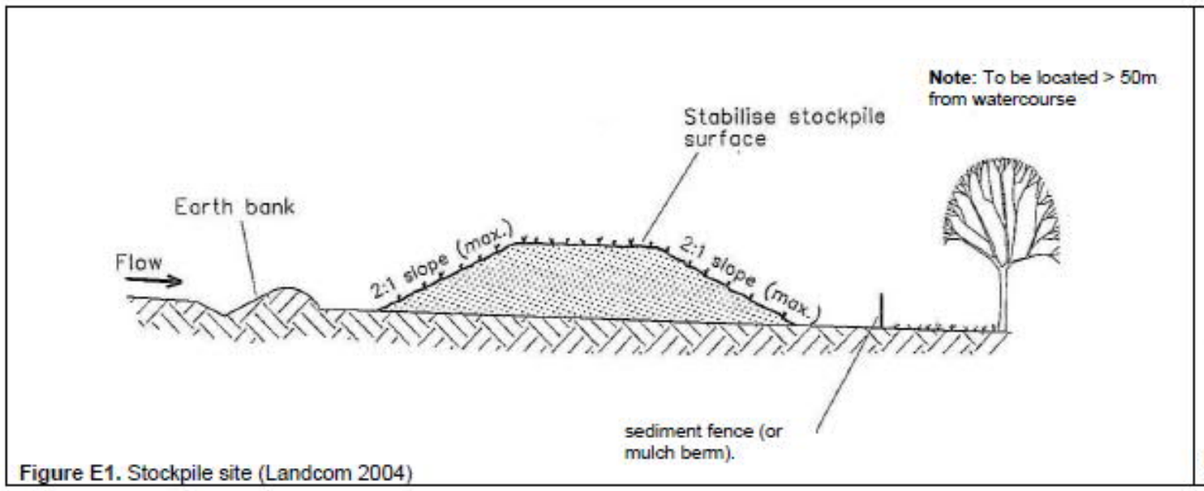


Figure E1. Stockpile site (Landcom 2004)

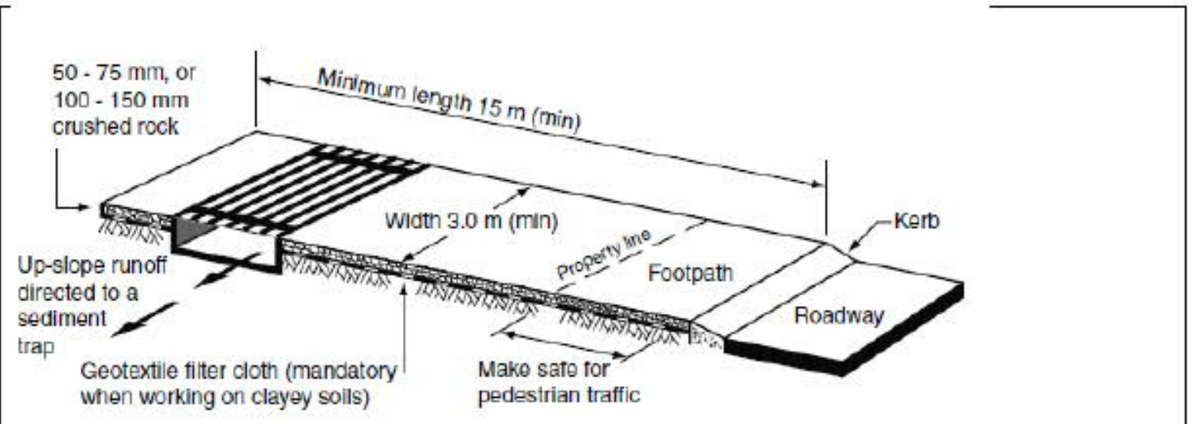


Figure F1. Construction exit – vibration grid (Catchments & Creeks 2010b)

Revision	Date	Drawn	Approved		Description
1	15/12/22	AF	EL		Sent to client

PREPARED BY:

ENVIRONMENTAL CONSULTANTS TERRITORY PROUD

PREPARED FOR:

Blue Energy

Primary ESCP Typical Designs

Period: TBC

NOT TO SCALE | | REVISION:1

APPENDIX H WEED MANAGEMENT PLAN

Environmental Management Plan

Wiso Basin Seismic Survey EP200, 205 & 207

Weed Management Plan

Wiso Basin Seismic Survey on EP 205 & 207

DOCUMENT CONTROL RECORD

Job	EZ21217
Document ID	218276-45
Author(s)	N. Harvey (EcOz), T. Reilly (EcOz)

DOCUMENT HISTORY

Rev	Reviewed by	Approved by	Issued to	Date
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2	T. Reilly (EcOz)	R. Hall (EcOz)	J. Phillips (Blue Energy)	20/06/2023
3	T. Reilly (EcOz)	R. Hall (EcOz)	J. Phillips (Blue Energy)	9/11/2023

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Acronyms

2D	two dimensional
AAPA	Aboriginal Areas Protection Authority
DEPWS	Department of Environment, Parks and Water Security
DWO	Dedicated Weed Officer
EMP	Environmental Management Plan
EP	exploration permit
NLC	Northern Land Council
NT	Northern Territory
WMA	Weed Management Act
WMP	Weed Management Plan
WoNS	*Weed of National Significance*

1 INTRODUCTION

Blue Energy is a rapidly evolving oil and gas exploration company strategically positioned with abundant conventional and unconventional assets throughout Queensland and the Northern Territory to meet the rising demand for cleaner energy.

Blue Energy propose to complete a two dimensional (2D) seismic survey within exploration permits (EP) 205 and 207, which is located approximately 465 km south-west of Katherine, Northern Territory.

These works will be regulated through an Environmental Management Plan (EMP) approved by the Department of Environment, Parks and Water Security (DEPWS).

This document describes the Weed Management Plan (WMP) for the Project.

1.1 Scope and objectives

The scope of this WMP is to outline the weed management measures that will be implemented to prevent the introduction and spread of weeds during the works associated with the project.

The objectives of this weed management plan are:

- Comply with all applicable legislation, regulations, conditions and regional weed management plans; including the NT Weed Management Planning Guide: Onshore Petroleum Projects (as per Clause A.3.6 of the Code).
- Address the specific weed management requirements of station owners.
- Provide controls for all project activities to avoid introducing new weed species into the project area.
- Avoid or control the spread of existing weed species into new areas within the project area.
- Detail the monitoring, reporting and incident response procedures appropriate for the management measures.

The weed management plan is applicable to all activities associated with the 2D seismic survey on EP 205 and EP 207 and will be used by all personnel (including contractors) involved in project activities.

1.2 Dedicated weed officer

The *Scientific Inquiry into Hydraulic Fracturing* recommended a dedicated weed officer for each Project and its specified regulated activity under the Petroleum Act. To ensure necessary weed management outcomes, the weed officer must have relevant skills and experience and availability to successfully manage weed related issues for the project.

They are to be responsible and accountable for delivery of all weed related requirements of the project in accordance with this WMP and the overarching EMP.

Contact details for Blue Energy's' weed officer for the project are:

Leeton McHugh Manager (Terrex)	**Mobile:** 0422 232 319 **Email:** lmchugh@terrexseismic.com

1.3 Blue Energy environmental policy

Blue Energy's Environmental Policy is a public declaration of its understanding of the environmental impacts and risks associated with its operations, as well as a demonstration of its compliance with all relevant environmental, health and safety regulations, legislation and guidelines. A copy is provided with the EMP.

2 PROJECT AREA

2.1 Project components

Key components associated with the project are described below and shown in Figure 2-1. The 'project area' refers to the physical footprint of the proposed activities.

2.1.1 Seismic survey

The Project comprises of two seismic lines (03B and 06C) which will provide a total data acquisition length of approximately 214 km. The two seismic lines (03B and 06C) are located in bushland and will require line preparation works.

2.1.2 Camp sites

Three camps will be required for this exploration activity. Four camp options have been selected. Locations have been strategically positioned to minimise the number of camps required for the seismic survey (i.e. centrally positioned), to minimise vegetation clearing (i.e. positioned within existing cleared / disturbed areas), to avoid significant habitat areas or threatened species, and to avoid impacts to cultural heritage values (as identified by AAPA and Archaeological Cultural Heritage Assessment).

Camp sites will require a pad to be cleared (dimensions will be approximately 80 x 100 m).

2.1.3 Access tracks

No access tracks are required for this program. The proposed seismic lines will be used to access all works areas and camp sites.

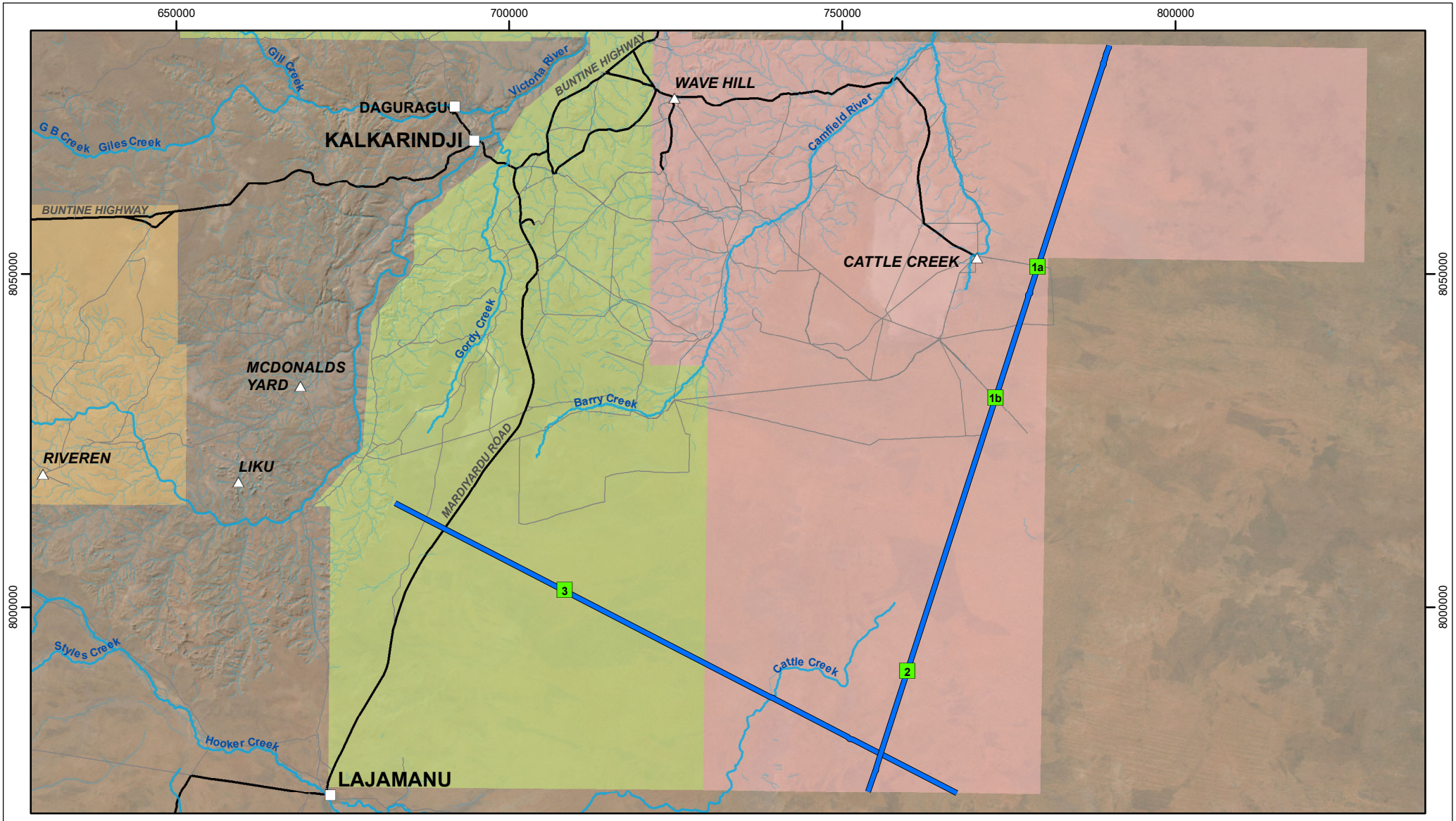

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Figure 2-1. Map of Project components

3 LEGISLATION

The following legislation, statutory obligations and guidelines were considered during the preparation of this weed management plan.

3.1 Petroleum (Environment) Regulations

The Petroleum (Environment) Regulations, (the regulations), require submission of an EMP prior to any petroleum exploration or production activity. This weed management plan represents a component of the Blue Energy EMP for EP 205 and 207, as required under the regulations.

3.2 Weed Management Act

Some species of introduced flora are declared to be weeds under the NT *Weeds Management Act* because of the environmental and/or economic harm they can cause. This NT Act aims to:

> *Protect the Territory's economy, community, industry and environment from the adverse impact of weeds*

It declares undesirable species of plants as weeds, and requires these species to be controlled, eradicated or prevented from entering the Northern Territory (NT) depending on their classification. Under the Act, weeds are classified into one of three classes which are outlined in Table 3-1.

Table 3-1. Weed categories

Category	Weed species
Class A	To be eradicated. These plants either do not occur in Northern Territory but pose a significant threat if they invade, or are present and pose a serious threat. Under the Weed Management Act reasonable effort must be made to eradicate these weeds.
Class B	Growth and spread to be controlled. These weeds often occur widely in the Northern Territory. They can spread further and should be prevented from doing so. To prevent their spread, continuing control measures are required. Under NT legislation reasonable attempts must be made to contain the growth and prevent the movement of these plants.
Class C	Introduction into the Territory is to be prevented. This category includes plants that pose an unacceptable risk of spreading into the Territory or to other parts of Australia if they were to be sold or traded in the Northern Territory and are a serious threat to another State or Territory of Australia. All schedule Class A and B weeds are considered to be Class C weeds.

The remaining introduced flora species are referred to as *environmental weeds*. Environmental weeds are defined as non-indigenous plant species that have invaded (or have the potential to invade) natural ecosystems and threaten (or have the potential to threaten) environmental and/or conservation assets. They can also be Australian native species that are not local (indigenous) to an area but have potential to damage the local plant community.

The Act specifies how weeds in each of the classes must be treated.

Weed management plans for specific weeds are endorsed under this Act.

3.3 Weeds of National Significance (WoNS)

The Commonwealth government has categorised some species as Weeds of National Significance (WoNS). This is a list of the most problematic plant species in Australia as determined by the federal government.

3.4 Management Plans and guidelines

3.4.1 Statutory Weed Management Plans

These plans are legal documents containing specific information about management requirements for certain high priority weeds. Section 4 lists weeds that are present or have the potential for introduction on EP 205 and 207 and notes those with an associated statutory weed management plan.

3.4.2 Guidelines and standards

The following guidelines associated with the management of weeds in the NT have also been considered during the preparation of this WMP:

- Weed Management Planning Guide: Onshore Petroleum Projects (DENR 2019) https://depws.nt.gov.au/__data/assets/pdf_file/0006/708558/weed-management-planning-guide-onshore-petroleum-projects.pdf
- Northern Territory Weed Management Handbook (Weed Management Branch, 2021) https://nt.gov.au/__data/assets/pdf_file/0004/233833/nt-weed-management-handbook.pdf
- Northern Territory Weed Data Collection Manual (Weed Management Branch, 2015) https://nt.gov.au/__data/assets/pdf_file/0007/233854/nt-weed-data-collection-manual-section-1.pdf

3.4.3 Regional weed strategies

Regional weed strategies have been developed for the Darwin region, Katherine region, Tennant Creek region and the Alice Springs region. The strategies set out a strategic approach for the Northern Territory Government and key stakeholders to reduce the adverse impact of weeds. They have been developed in line with the DEPWS *Strategic Plan 2021-24* and the *Australian Weed Strategy 2017-27*.

The Project area lies predominantly within areas covered by the *Katherine Regional Weed Strategy 2021-2026 (DEPWS 2021b)* with a small portion covered by the *Alice Springs Regional Weed Strategy 2021 – 2026 (DEPWS 2021a)*. These strategies focus on weeds that are most important to the region, categorising them as either:

- *Category 1 – Priority weeds* (present in the region, widely considered feasible to eradicate from the Region, typically evaluated as very high risk and have isolated and restricted distributions)
- *Category 2 – Priority weeds or strategic control – including the eradication of outliers* (species warranting strategic control across the landscape due to the high impact they have on land managers and on broader economic and environmental values)
- *Category 3 – Weeds of concern* (assessed by the weed risk management system as a medium to high risk, or have not been assessed, but have been identified by stakeholders as posing a threat to the values of the Region)
- *Category 4 – Hygiene and biosecurity* weeds (it is important for landholders to implement weed hygiene and other biosecurity measures to prevent the spread of weeds into clean areas, and to control these species where the opportunity arises)
- *Category 5 – Alert weeds* (have the potential to have a high level of impact to the region should it become established, the likelihood of the species naturalising and spreading in the region is perceived to be high).

4 WEED SPECIES

4.1 Desktop review

Priority weed species for region are listed in Table 4-1 (i.e. species that are either declared as Class A, B or C under the *Weeds Management Act*; or listed in the regional weeds strategy) (point records are shown in Figure 4-1). A review of the NT Weed Branch dataset (March 2022) within 100km of the Project footprint indicates the most frequently recorded species is Parkinsonia (*Parkinsonia aculeata*) (Class B and WoNS), of which most records are within waterways and alluvial flood-outs. Other species with over 100 records within the search area include Prickly Acacia (*Vachellia nilotica*), Rubber Bush (*Calotropis procera*), Bellyache Bush (*Jatropha gossypiifolia*), Neem (*Azadirachta indica*) and Coffee Senna (*Senna occidentalis*).

This dataset indicates that Parkinsonia, Prickly Acacia, Bellyache Bush and Noogoora Burr may be present in close proximity to station tracks on Wave Hill and Cattle Creek stations. The current program does not plan to use these tracks for access (proposed seismic lines will be used). The dataset also indicates low numbers of Parkinsonia and Rubber Bush in the vicinity of the revised alignment of 06C (positioned on existing station tracks).

Table 4-1. Priority weed species previously recorded within the region of the Project footprint

Scientific name	Common name	WoNS	Class	Weed Strategy Category		Number of records (with 100km)#
				Alice Springs	Katherine	
Parkinsonia aculeata	Parkinsonia	Y	B	2	3	5138
Vachellia nilotica	Prickly Acacia	Y	A	1	-	1276
Calotropis procera	Rubber Bush	-	B	-	3	1113
Jatropha gossypiifolia	Bellyache Bush	Y	A	-	2	284
Azadirachta indica	Neem	-	B	-	2	227
Senna occidentalis	Coffee Senna	-	B	-	4	100
Cenchrus ciliaris	Buffel Grass	-	-	2	-	58
Andropogon gayanus	Gamba Grass	Y	A	-	2	49
Themeda quadrivalvis	Grader Grass	-	B	-	2	49
Eragrostis minor	Lovegrass - minor	-	-	3	-	45
Leonotis nepetifolia	Lions Tail	-	B	-	3	39
Martynia annua	Devils Claw	-	A	2	2	35
Xanthium strumarium	Noogoora Burr	-	B	4	4	21
Mesosphaerum suaveolens	Hyptis	-	B	4	4	20
Senna obtusifolia	Sicklepod Senna	-	B	-	4	17
Prosopis pallida	Mesquite	Y	A	-	1	15
Sida acuta	Spiny-head Sida	-	B	-	4	12
Tribulus terrestris	Caltrop - terrestris	-	B	4	-	8
Tamarix aphylla	Athel Pine	Y	A	-	2	7
Cenchrus echinatus	Mossman River Grass	-	B	4	4	5
Datura inoxia	Thornapple - inoxia	-	C	-	3	4
Sida cordifolia	Flannel Weed Sida	-	B	-	4	4
Leucaena leucocephala	Coffee Bush	-	-	-	3	3
Acanthospermum hispidum	Star Burr	-	B	-	4	2
Datura ferox	Longspine Thornapple	-	A	-	3	2
Ziziphus mauritiana	Chinee Apple	-	A	2	2	2
Cascabela thevetia	Yellow Oleander	-	-	-	3	1
Stachytarpheta sp	Snake Weed	-	B	-	4	1

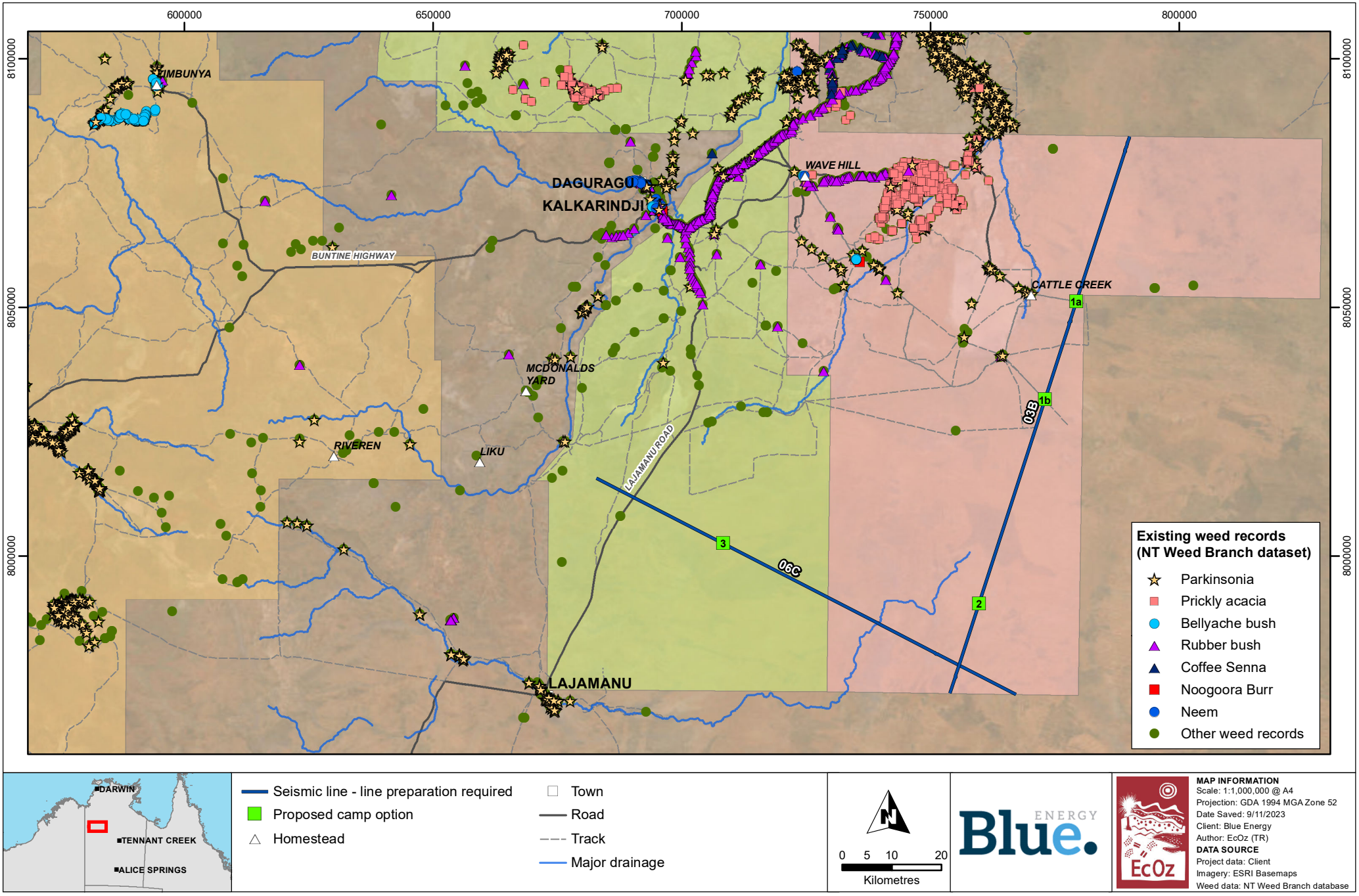

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Figure 4-1. Map of regional weed records

4.2 Baseline weed survey

A baseline weed survey of the Project footprint was undertaken in April 2022 as part of the ecological assessment (Appendix C of the EMP) to determine the current level of weed infestation, and to inform weed management priorities for the Project. Weed species targeted were those listed as Class A or B under the Weed Management Act, WoNS or priority weed in the regional weed management plan (as per Section 4.1).

The baseline weed survey was conducted using a helicopter, which enabled the entire length of each seismic line and camp area to be aerially inspection for key weed species[1]. Two surveyors were present from EcOz, situated on either side of the helicopter (additional to this, the helicopter pilot was also familiar with some of the key weed species such as Rubber Bush, Parkinsonia and Prickly Acacia). The helicopter was flown at low altitude (20 to 40m above ground) at low speeds, and if suspected weed species were observed from the air (i.e. Parkinsonia bush, Buffel Grass infestation), a hover was conducted to confirm identification. Ground checks were conducted if weed species could not be confidently identified and/or required weed data could not be collected (in accordance with NT Weed Data Collection Guidelines, described in Section 7.1). Ground checks were also conducted at regular intervals along lines 03B and 06C (shown on Figure 4-2), or when sensitive and/or weed prone habitat was observed (i.e. drainages, existing disturbances such as fence lines).

The survey concluded that no weed occurrences are present within the proposed seismic lines (and associated camp locations) that will require vegetation clearing / line preparation works (i.e. lines 03B and 06C; and camp sites 1a, 1b, 2, 3) (refer to Figure 4-2). Occurrences of Parkinsonia, Rubber Bush, Kapok Bush, Buffel Grass and Gallon's Curse were recorded during the weed survey; however seismic activities have in those areas have been removed from the EMP program.

It is likely that bores, water-points etc. will contain weeds, and there are numerous existing weed records on station tracks that may be used for line access. However, vegetation clearing and off-road driving in these areas is not proposed. All field staff will be made aware these areas are to be avoided to minimise chance of weed spread via vehicle or machinery contamination.

Prickly Acacia, Bellyache Bush, Neem and Coffee Senna were not observed during the survey. If present, these species are more likely to occur along drainages and disturbed areas. Weed checks will be conducted as part of weed management, and occurrences of these species will be recorded and appropriate measures implemented (i.e. avoidance or dedicated wash-downs).

[1] The baseline weed survey included survey of additional lines that have now been removed from the seismic program – line 01A, line 02A – and as such some baseline weed data is presented for areas outside the current Project footprint.

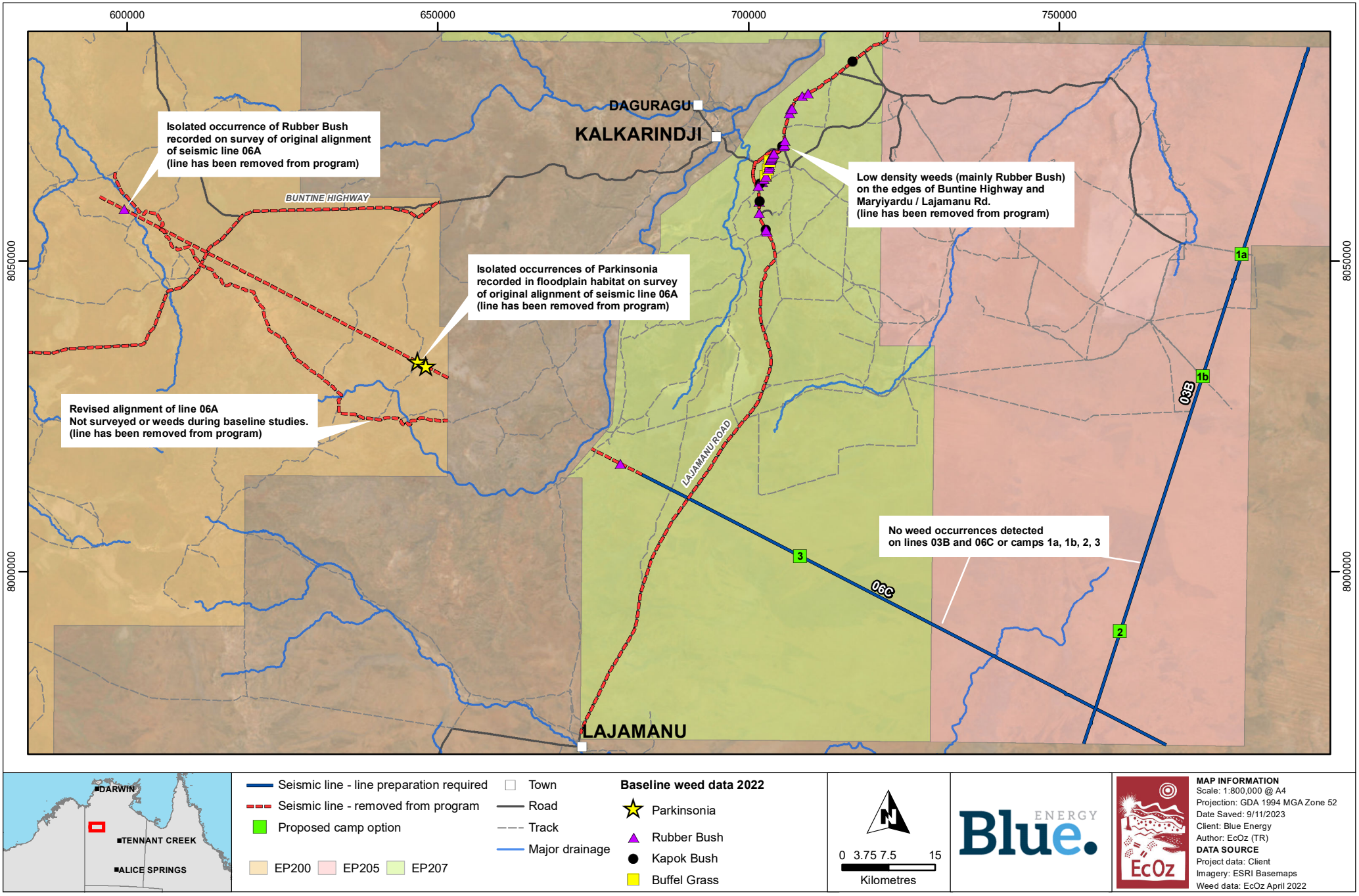

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Figure 4-2. Map of weed records from baseline survey in April 2022

5 WEED RISK MITIGATION MEASURES

The EMP risk assessment process identified weed introduction and/or spread risks associated with the scope of this project. Table 5-1 documents these risks, as well as the mitigation measures that will be implemented to reduce this risk.

Table 5-1. Weed risk and mitigation measures

Weed risk	Mitigation measures	Measurement criteria	Responsible person
Introduction of new weed species from plant and vehicles.	All vehicles/machinery/equipment entering the Project area to be cleaned and free of soil and vegetative matter, and have a valid weed hygiene declaration prior to entering Project area.	A register of vehicle / equipment / machinery inspection (and declaration) will be kept and maintained (example provided in Appendix A)	Dedicated Weed Officer
	Site environmental inductions for all personnel and contractors to highlight weed risk and requirement of vehicle weed hygiene requirements	All project staff undertake an environmental induction, to be recorded in the Training Register	Dedicated Weed Officer
	Spot checks on vehicle / equipment / machinery to ensure inspections are completed correctly	Recorded in register of vehicle / equipment / machinery inspection (example provided in Appendix A)	Dedicated Weed Officer
Weed spread from vehicles/plant traversing existing weed infestations	All personnel and contractors made aware of existing infestation locations and educated in the identification of existing weeds and potential priority weeds in the region.	All project staff undertake an environmental induction, to be recorded in the Training Register Weed maps (of known occurrences / infestations) and factsheets included as part of environmental induction	Dedicated Weed Officer
	All operational staff to attend weed identification training delivered by the NT Weed Management Branch	To be recorded in the Training Register	Dedicated Weed Officer
	All vehicles, machinery and equipment to stay on formed access tracks, except for those involved in clearing	All vehicle movements tracked via in-vehicle management systems or GPS	Dedicated Weed Officer
	All infestations of declared weeds (identified by baseline weed survey) will be demarcated and avoided, where possible, via a detour around the infestation.	Maintain demarcation during operations and inspect (and rectify if needed) daily	Field Representative / Dedicated Weed Officer
	If infestations cannot be avoided, an assessment will be made (with a suitably qualified person) to determine whether infestation should be treated prior to traversing; **and/or** carry out wash-down protocols at allocated area (i.e. vehicles and equipment are wash-down as demarcated area after exiting infestation).	Work plan to reflect additional tasks required, as developed by suitably qualified person. Monitoring will be undertaken at all infestations crossed (whether they are treated or wash-down) to ensure weed spread has not occurred.	Dedicated Weed Officer
	Vehicles/plant to be cleaned and free of soil and vegetative matter prior to moving beyond infestation	Spot checks on vehicle / equipment / machinery to ensure inspections are completed correctly.	Field Representative / Dedicated Weed Officer

6 ANNUAL ACTION PLAN

Targeted weed management is not currently proposed, because baseline surveys indicate no weed occurrences or infestations are present within the footprint (as described in Section 4.2). If additional weed species are identified within the footprint during preclearance surveys – this plan will be updated with appropriate control/treatment methods and times.

Priority species may be encountered include Parkinsonia, Prickly Acacia, Bellyache Bush, Neem, Noogoora Burr and Coffee Senna. If detected within the Project footprint (during baseline surveys or exploration works), these species will be managed as per advice from suitably qualified person, and control methods will be implemented where necessary as per the NT Weed Management Handbook. This plan will be updated accordingly.

https://nt.gov.au/__data/assets/pdf_file/0006/252168/weed-management-handbook.pdf

7 WEED MONITORING

The requirements for weed monitoring within each component of the Project are outlined below.

During exploration activities, monitoring for weed incursions will be ongoing (as part of daily and weekly site inspections), as all operational staff will have a responsibility to report new weed incursions to the Project's Dedicated Weed Officer. Should new weed incursions be identified, appropriate controls will be undertaken, and follow-up surveys will be within three months (or as per advice from weed officer) to ensure effective eradication of the incursions.

Weed monitoring will be undertaken by a suitably qualified person, with experience in the detection and identification of weed species known to occur in the region.

Weed inspections and monitoring will focus on the all Project components associated with the exploration activities, including the following areas:

- Known weed locations / infestations (currently no known weed occurrences)
- Seismic lines (including those that were cleared and positioned on roads/tracks)
- Camp site(s) (including those that were cleared, or those positioned within existing clearings)
- Any other areas that were disturbed during the 2D seismic survey project.

Post exploration activities, weed monitoring will occur on an annual basis (most likely in conjunction with rehabilitation monitoring), and will occur March to June to coincide with the end of wet season rainfall period (when most weed species are in growth / germination phase if present).

7.1 Recording

All weed monitoring and survey activities will be recorded in accordance with *the NT Weed Data Collection Guidelines* available at: https://nt.gov.au/environment/weeds/weed-mapping-and-data-sharing.

The following attributes of any new weed infestations will be recorded into a GPS-enabled device:

- Site name
- Weed name
- ID confidence
- Date of record
- Coordinate information
- Recorder / organisation
- Infestation size (i.e. 5m2, 20m2, 50m2, 100m2)
- Infestation density:
    - 1 = Absent, no weeds of this species in the area
    - 2 = < 1%; very few, not many weeds
    - 3 = 1 – 10%; more than one or two isolate plants
    - 4 = 11 – 50%; Many plants, covering up to half the area
    - 5 = > 50%; Weed forms the dominant cover

Weed data will be submitted as an Excel spreadsheet to the Weeds Management Branch (e.g. Appendix B).

In order to streamline the collection and provision of weed data to the Weed Management Branch Blue Energy will consider using Weed Mate (purpose built application for recording weed data). Weed Mate can be used offline in remote areas. Once uploaded over WIFI or mobile network the data is automatically sent to the user and Weed Management Branch in the form of an Xcel spreadsheet and kml.

A link for the NTG Weed Mate app - https://depws.nt.gov.au/rangelands/publications2/weed-management-publications/contribute-weed-data/weed-data-collection/nt-weedmate-app

7.2 Reporting

Blue Energy's' weed management officer will submit annual reporting against this WMP as a component of the EMP environmental reporting requirements. This will include

- Details of activities implemented to address weed spread and introduction risks
- Submission of all weed data collected
- Details of survey and monitoring events, including dates, personnel, maps and track data
- An overview of weed control events and success rates.

This annual report will be reviewed by the NT Government's Onshore petroleum weed management officer.

7.3 Notification procedure

All new weed incursions will be reported to the NT Weed Management Branch by Blue Energy's' dedicated weed officer. Initial notification will be verbal, followed by written notification of preliminary species identification and location within seven working days.

8 REFERENCES

Department of Environment, Parks and Water Security (DEPWS) (2021a). *Alice Springs Regional Weeds Strategy 2021-2026*. Palmerston, Northern Territory Government.

Department of Environment, Parks and Water Security (DEPWS) (2021b). *Katherine Regional Weeds Strategy 2021-2026*. Palmerston, Northern Territory Government.

Weed Management Branch (2015a) *Northern Territory Weed Management Handbook*, Department of Land Resource Management, Northern Territory Government, Darwin

Weed Management Branch (2015b). *Northern Territory Weed Data Collection Manual*, Department of Land Resource Management, Northern Territory Government, Darwin

DENR (2019), Weed Management Planning Guide: Onshore Petroleum Projects https://depws.nt.gov.au/__data/assets/pdf_file/0006/708558/weed-management-planning-guide-onshore-petroleum-projects.pdf

APPENDIX A WEED HYGIENE DECLARATION

Weed Hygiene Declaration

This declaration is valid for transport and movement of vehicles and equipment from _____ to _____ (provide locations) and will stay current pursuant to the definition of clean in Definitions.

VEHICLE DESCRIPTION

Make: _____ Registration # or engine number: _____

Was clean prior to entry to _____ (destination)

Add equipment examined to the Equipment Register

Certifier name _____

Certifier qualification _____ Qualification date _____

DECLARATION

I, _____ (name),of _____ (street)

_____ town _____ state _____ telephone

declare the information I provided in this declaration is true and correct and I have read the accompanying explanatory notes before completion of this declaration.

Signature _____ Date _____

EXPLANATORY NOTES

This certification process was developed to fulfill one of the stated purposes of the NT *Weed Management Act* and the Qld Land Protection *(Pest and Stock Route Management) Act 2002*.

It applies to, as a minimum, all weeds listed as weeds in the relevant jurisdiction and any plants that a stakeholder does not want transported or introduced.

DEFINITIONS

Clean:

- Means that no soil or organic matter is present on vehicles or equipment
- Vehicles and equipment are considered clean if, after certified weed free, it does not touch soil or vegetative material, ie for a vehicle this means it travels on sealed or well-maintained unsealed roads.

Equipment means anything other than a vehicle.

Vehicle includes anything used for carrying a thing or person by land, water or air.

Weed reproductive material means any part of a plant that is capable of producing another plant by sexual or asexual means. This includes seeds, bulbs, rhizomes, tuber, stem, leaf cuttings or a whole plant.

Well-maintained unsealed road means roads that do not have vegetation growing on or encroaching onto the area occupied by traffic.

Checklist-Cars, 4WD, trucks and trailer

Vehicle Rego Number	Date of inspection

INTERIOR	**Pass** ☐	**Fail** ☐
• Inspect foot wells • Inspect under mats and carpet as well as the pile of carpet		
BOOT OR TRAY	**Pass** ☐	**Fail** ☐
• Inspect under mats or carpet • Inspect inside spare tyre area/behind spare tyre • Inspect other recesses in the boot/rear of the vehicle • Inspect recess of boot lid		
ENGINE BAY	**Pass** ☐	**Fail** ☐
Inspect all areas of the engine bay with a particular focus on areas listed below • Inspect the radiator • Inspect the grill • Inspect the top of transmission gearbox • Inspect the recess under windscreen wipers • Inspect air filter box		
UNDERSIDE OF VEHICLE	**Pass** ☐	**Fail** ☐
• Inspect the wheel arches, wheel trims, flares, step treads, bumpers • Inspect the mud flaps • Inspect the tyre rims (particularly the rear side) • Inspect the top of axels and differentials • Inspect the top of muffler and surrounds • Inspect the spare tyres on 4WDs and station wagons (they are often suspended underneath). Remove to check • Inspect top side of any bash plates **Note:** these are potentially a high risk area as contaminants collect inside the horizontal positioned rim of the spare tyre.		
CARGO	**Pass** ☐	**Fail** ☐
• Inspect all equipment, list in the equipment register below		
FOR UTILITIES AND TRUCKS	**Pass** ☐	**Fail** ☐
• Inspect the floor of the tray. Inspect channels of tail gates and tray drop sides • Inspect side guards. • Inspect under chassis rails, including within steel sections • Inspect the gaps in the floor welds or boards and bolt holes on tray.		
TRAILERS	**Pass** ☐	**Fail** ☐
• Inspect wheels • Inspect guards and trays • Inspect channels and draw bar • Inspect underbody		

Checklist-Cars, 4WD, trucks and trailer

Vehicle Rego Number	Date of inspection

EQUIPMENT REGISTER

APPENDIX B WEED CONTROL RECORDING TEMPLATE